

#### **ENVIRONMENTAL ASSESSMENT**

# PROPOSED NEW BRITAIN LANDFILL SOLAR DEMING ROAD BERLIN, CONNECTICUT

**Prepared for:** 

C-TEC Solar 1 Griffin Road South Bloomfield, CT 06002

**Prepared by:** 

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## 1 Introduction

All-Points Technology Corporation, P.C. ("APT") prepared this Environmental Assessment ("EA") on behalf of C-TEC Solar (hereinafter referred to as "C-TEC") for the proposed installation and utility interconnection of a solar electric generating facility (collectively, the "Project"), with output of approximately 1.30 megawatts<sup>1</sup> ("MW") located in the Town of Berlin, Connecticut ("Town"). This EA has been completed to support C-TEC's submission to the Connecticut Siting Council ("Council") of a petition for declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the construction, maintenance, and operation of the electric generating facility.

The results of this assessment demonstrate that the proposed development will comply with the Connecticut Department of Energy and Environmental Protection's ("DEEP") air and water quality standards and will not have an adverse effect on the existing environment and ecology of the Site or the surrounding area. Further, the proposed Project is neither defined as an "affecting facility" nor located within an "environmental justice community" under Connecticut General Statutes § 22a-20a.

The Project will be developed on a 43.30-acre property south of Deming Road in Berlin owned by the City of New Britain (referred to herein as the "Site"). No street address has been assigned to the Site; the Town Assessor records identify it as MBLU 10-1-82-2. The Site hosts a capped landfill with an electrical transmission corridor occupying the eastern limits. It is zoned General Industrial. Willow Brook is to the west, and the Mattabasset River is to the south.

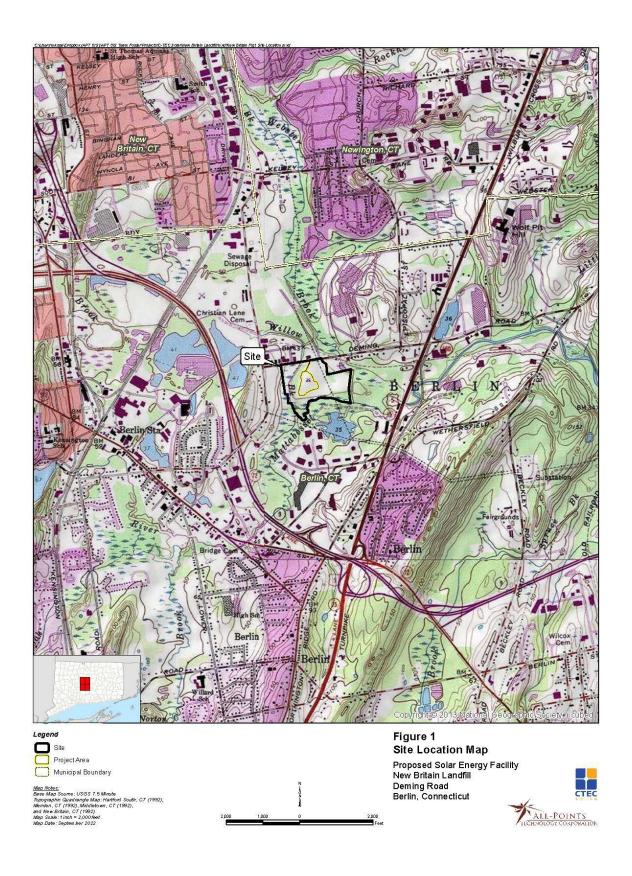
Figure 1, Site Location Map, depicts the location of the Site and the surrounding area.

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<sup>&</sup>lt;sup>1</sup> The output referenced is Alternating Current (AC).

<sup>&</sup>lt;sup>2</sup> "Affecting facility" is defined, in part, as any electric generating facility with a capacity of more than ten megawatts.

 $<sup>^3</sup>$  "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.



## 2 Proposed Project

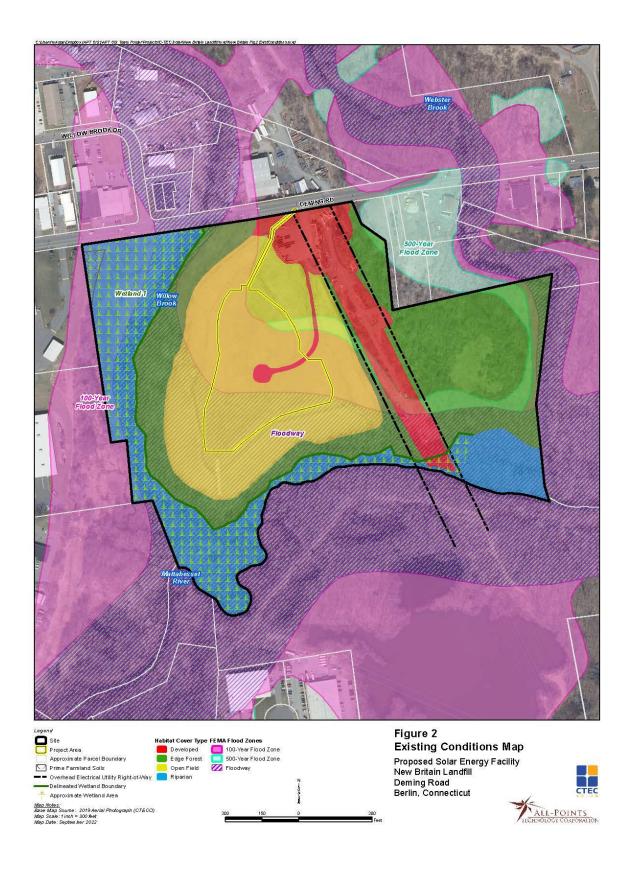
#### 2.1 Project Setting

The Project will occupy ±5.02 acres (the "Project Area") of the ±43.4-acre Site and would include the solar facility (the "Facility") and an electrical service interconnection line. Access to the Facility will extend south over an existing gravel drive from Deming Road into the center/top of the existing landfill. The electrical interconnection will extend north from the Facility over the existing landfill to the access entrance off Deming Road.

The Site's existing topography is generally sloping consistent with a closed landfill, ranging from approximately 32 feet to 105 feet above mean sea level ("AMSL").

Figure 2, Existing Conditions, depicts current conditions within the Project Area.

The surrounding area includes commercial and industrial development mixed with wooded areas to the north, south and west, dense residential development to the northeast and southwest, and open land occupied by the Mattabasset River and Willow Brook to the south and west, respectively. U.S. Route 5 (Berlin Turnpike) and State Route 9 extend in generally north-south directions to the east and west of the Site, respectively.



#### 2.2 Project Development and Operation

The Facility will consist of 3,228 540W photovoltaic modules generating 1.30 MW AC, and associated equipment, including one (1) 10'x20' concrete equipment pad that houses the inverter and transformer. A ballast-mounted racking system will be used to secure the panel arrays. The Site is currently surrounded by an eight (8)-foot tall chain link fence; no additional fencing is required for the Facility. The Project also requires an electrical service interconnection to the local distribution system. This will be accomplished through the combination of a ground-mounted cable tray and a transition to overhead near Deming Road. As the Site is currently occupied by a closed landfill stabilized with turf grasses and the Project will not significantly change that existing cover, limited stormwater measures are proposed. Once complete, the Project (consisting of the fenced Facility, interconnection, and vehicular and utility access) will occupy approximately 5.02 acres.

Proposed development drawings are provided in Appendix A, *Project Plans*.

The leading edge of the panels will be at least 3' above the existing ground surface, which will provide adequate room for any accumulating snow to "sheet" off. Any production degradation due to snow build-up has already been modeled into the annual system output and performance calculations. C-TEC does not envision requiring any "snow removal" operations; rather, the snow will be allowed to melt or slide off.

Construction activities within the Project Area will require the following:

- installing erosion and sedimentation control measures;
- installing ballast supports, racking, and modules;
- installing a ground-mounted cable tray to house the electrical service lines; and
- installing four (4) overhead utility poles for interconnection to the existing electrical distribution system along Deming Road.

Since earthwork is avoided/limited due to areas outside the limits of the capped landfill, the Project development complies with DEEP's *Appendix I, Stormwater Management at Solar Array Construction Projects*. ("Appendix I") to the *General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities* ("General Permit").

The Facility is unstaffed; after construction is complete and the Facility is operable, traffic associated with this Project will be minimal. It is anticipated that the Facility will require routine maintenance of the electrical equipment one (1) time per year. Annual maintenance will typically involve two (2) technicians for a day. Repairs will be made on an as-needed basis. It is expected that mowing would occur, at a minimum, one (1) time per year to suppress woody growth and maintain a meadow environment in accordance with the current vegetation maintenance schedule for the capped landfill.

#### **2.2.1 Access**

The Facility will be accessed from Deming Road via an existing gravel drive on the landfill. This single existing gravel access will serve for both construction and permanent access to the Facility.

#### 2.2.2 Public Health and Safety

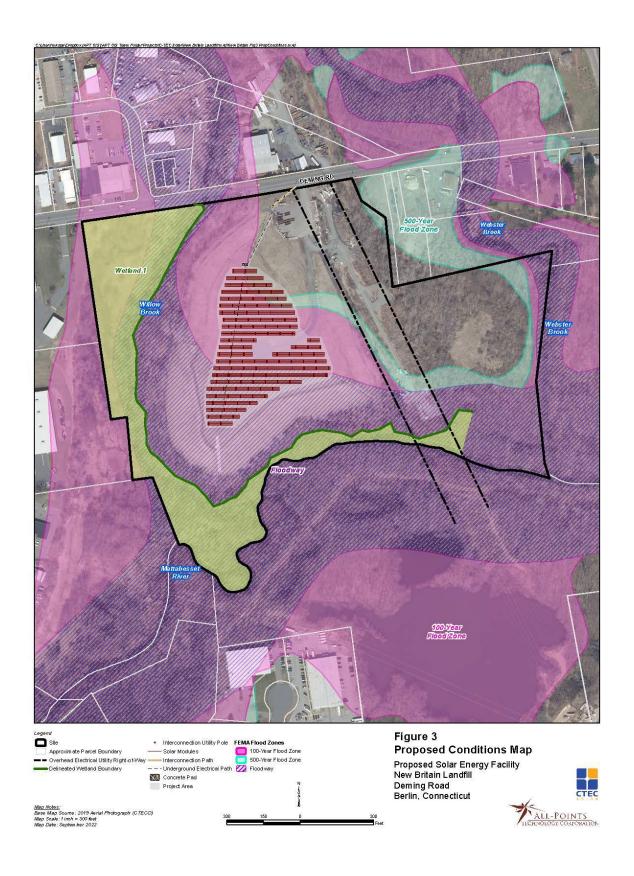
The Project will meet applicable local, state, national and industry health and safety standards and requirements related to electric power generation. The Facility will not consume any raw materials, will not produce any by-products and will be unstaffed during normal operating conditions.

The Site is currently secured by an eight (8)-foot tall chain link fence with anti-climb mesh. The entrance is gated, limiting access to authorized personnel only. All Town emergency response personnel will be provided training by C-TEC. The Facility will be remotely monitored and will have the ability to remotely de-energize in the case of an emergency.

## **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 results of this assessment demonstrate that 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 relationship with the resources discussed herein.



#### 3.1 Air Quality

Due to the nature of a solar energy generating facility, no air emissions will be generated during operations and, therefore, the operation of the Facility 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 <u>de minimis</u>. Such emissions will be mitigated using available measures, including limiting idling times of equipment; proper maintenance of all vehicles and equipment; and watering/spraying to minimize dust and particulate releases. In addition, all onsite 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

APT Registered Soil Scientists identified and delineated portions of one (1) wetland on or proximate to the Site during a field inspection completed on August 3, 2022. The results of this inspection are discussed below; the locations of wetland and watercourse resources are depicted on Figure 2, *Existing Conditions*.

#### 3.2.1 Wetlands and Watercourses

The Site wetland consists of two perennial watercourses with bordering, primarily forested, floodplain wetlands. Willow Brook enters the western side of the Site via three (3) 6-foot metal culverts and drains south until converging with the Mattabesset River in the southwestern corner. The narrow bordering forested wetlands associated with Willow Brook consist of a 10-15' wide stream channel. Fill areas along the western bank of Willow Brook present evidence of historic manipulation and narrowing of the once natural channel. Upon converging with the Mattabesset River the bordering wetlands transition to a broader floodplain system with inclusion pockets of emergent vegetation. The Mattabesset River corridor is located in the southern portion of the Site, flowing in a southwesterly direction. This river is similar in character to Willow Brook, being comprised of a sandy/cobble bottom, but is a more active and broader floodplain system, containing backwater wetlands and historic river meander scars.

Soils within bordering wetlands throughout both riparian systems consist of recent alluvial deposits overlain by colluvium material in some areas facing the landfill. Evidence of historic dumping was observed along the southern boundary abutting the delineated wetland, apparently associated with the former active landfill operation. Forested areas are dominated by box elder (*Acer negundo*), American elm (*Ulmus americana*), American sycamore (*Platanus occidentalis*), northern catalpa (*Catalpa speciosa*), and shagbark hickory (*Carya ovata*). A scrub/shrub area dominated by grey dogwood (*Cornus racemosa*), bush honeysuckles (*Lonicera spp.*), and autumn olive (*Elaeagnus umbellata*) are present within the southeastern corner associated with the electrical transmission right-of-way.

#### 3.2.2 Wetland Impacts

The Facility will be located in the central portion of the Site within an area that is a former landfill. The landfill has been capped and currently consists of maintained open field. No direct wetland impacts or tree clearing are associated with the proposed development activities. The Facility would be located approximately 190 feet east of the nearest wetland boundary.

Construction activities would not be expected to result in an adverse impact to the Site's wetland resources based on the minimal ground disturbance proposed, 190-foot separating distance, and protection measures depicted on the sedimentation and erosion control plan (see sheet number EC-3 of the Project Plans). Table 1, *Summary of Project Wetlands*, provides a summary of distances to wetland resources.

**Table 1: Summary of Project Wetland** 

Wetland Impacts	
Direct Impacts to Site Wetland (±sq.ft.)	0
Project Proximity to Site Wetland (± feet)	190

#### 3.2.3 Floodplain Areas

APT reviewed the United States Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map ("FIRM") covering the Site. A 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 Site is mapped on FIRM PANEL #09003C 0513 F, dated September 26, 2008. Based upon the reviewed FIRM Map, the majority of the Site is located within the 100-year flood zone with its southern and western portions located within floodways associated with Willow

Brook and the Mattabesset River. A small portion of the 500-year flood zone extends into the eastern portion of the Site. The mapping suggests portions of these resources all lie within the Project Area.

Based on a recent survey and field observations, FEMA mapping does not reflect the current ground elevation of the capped landfill, which sits substantially higher than the 100-year base flood elevation. For example, the majority of the proposed Facility sits at elevation 90 feet or higher while the highest base flood elevation within or proximate to the Project Area is at 43 feet. As such, the Facility is situated approximately 47 feet higher than the highest base flood elevation. C-TEC is in discussions with both the Town of Berlin Engineering Department and the DEEP to determine how best to resolve this mapping discrepancy. The proposed Facility will not impact any flood hazard zones or downstream areas so no special design considerations or precautions relative to flooding are required for the Facility.

#### 3.3 Water Quality

The Project will comply with DEEP's water quality standards. 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 2004 *Connecticut Stormwater Quality Manual* and Appendix I.

#### 3.3.1 Groundwater

Groundwater underlying the Site is classified by publicly available DEEP mapping as "GB". This classification is indicative of the Site's development as a landfill. This classification indicates groundwater within the area is presumed not suitable for human consumption without treatment. Designated uses in GB-classified areas include industrial process water and cooling waters and base flow for hydraulically connected surface water bodies. An area classified as "GA, GAA may not meet current standards" abuts the Site to the south.

Based upon a review of available DEEP mapping, the Site is not located within a mapped (preliminary or final) DEEP Aquifer Protection Area. The Project will have no adverse environmental effect on ground water quality.

#### 3.3.2 Surface Water

DEEP mapping indicates the Site is located in Major Drainage Basin 4 (Connecticut River) and Regional Drainage Basin 46 (Mattabesset River). The southeastern portion of the Site is located in Subregional Drainage Basin 4600 (Mattabesset River) and Local Drainage Basin 4602-00 (Mattabesset River). The western portion is located in Subregional Drainage Basin 4602 (Willow Brook) and Local Drainage Basin 4602-00 (Willow Brook). The northern portion is located in Subregional Drainage Basin 4603 (Webster Brook) and Local Drainage Basin 4603-00 (Webster Brook).

Willow Brook traverses the western portion of the Site and the Mattabesset River traverses the southern portion of the Site. Based upon DEEP mapping, the portions of Willow Brook and the Mattabesset River within the Site are classified as Class B surface waterbodies. Designated uses for Class B surface water bodies include habitat for fish and other aquatic life and wildlife; recreation; navigation; and water supply for industry and agriculture. Webster Brook is downgradient and approximately 80 feet east of the Site. Webster Brook is classified as a Class A surface waterbody by the DEEP. Designated uses for Class A surface water bodies include habitat for fish and other aquatic life and wildlife; potential drinking water supplies; recreation; and water supply for industry and agriculture. Based on the separating distance from these resources, ±190 feet at the nearest point, the Project will have no effect on these surface waterbodies.

Connecticut Department of Public Health mapping indicates the Site is not located within a Public Water Supply Watershed. The Site is located within the Berlin Water Control Commission service area.

During construction, erosion and sediment ("E&S") controls will be installed and maintained in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control. The Facility will utilize a concrete ballast racking system that generally avoids soil disturbance thereby limiting the need for extensive E&S controls. With proper installation and maintenance of these controls, and the separating distances to any of the aforementioned water resources, the Project will have no adverse environmental effect on surface water quality.

#### 3.3.3 Stormwater Management

In addition to the 2004 Connecticut Stormwater Quality Manual and 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, the Project has been designed to meet DEEP's General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (GP) Appendix I. Combined, these address three (3) main concerns: stormwater runoff peak attenuation, water quality volume treatment, and E&S control during construction.

#### **Stormwater Runoff Peak Attenuation**

The Project will incorporate the installation of ballast mounted solar modules and associated equipment. No ground disturbance or penetrations are proposed on the landfill to maintain the integrity of the existing cap. The capped landfill is considered to be impervious. As such, no increase in stormwater runoff is anticipated for this Project. The landfill has existing stormwater management features that will be maintained and is anticipated to be sufficient.

#### **Water Quality Volume Treatment**

The Project is not anticipated to increase the effective impervious cover of the Site. As such, it would likely not require additional water quality volume treatment.

#### **Erosion and Sediment Control During Construction**

Since the Project is not anticipating any ground disturbance or penetration on the capped landfill, no protective measures are proposed as no sediment should be generated during construction. A construction entrance is proposed along the beginning of the gravel drive and a stockpile location will be provided as needed. With the incorporation of these protective measures, stormwater runoff from Project development is not anticipated to result in adverse impacts to water quality associated with nearby surface water bodies.

#### 3.4 Habitat and Wildlife

Four (4) distinct habitat types (vegetative communities) separated by transitional ecotones are located on the Site and identified within the Project Area. These habitats were assessed using remote sensing and publicly available datasets and were physically inspected during the August 3, 2022 field inspection.

The habitats occupying the Site are as follows.

- Open Field;
- Edge Forest;
- · Riparian; and
- Developed.

#### **Open Field**

Open Field habitat encompasses the central portion of the Site, consisting of a regularly mowed/maintained grass field associated with the capped landfill. Routine maintenance of this field suppresses other herbaceous and shrub species. This habitat is dominated by cool season grasses and typical forbs like red clover (*Trifolium pratense*). A transitional scrub/shrub and/or late old field successional ecotones exist between the edge Open Field and surrounding forested habitats (Edge Forest and Riparian) dominated by golden rod (*Solidago spp.*) and mugwort (*Artemisia vulgaris*) where less frequent mowing occurs.

Project impacts will mostly be within the Open Field habitat with the total area of disturbance of  $\pm 4.8$  acres. This area is the capped landfill, with a high level of disturbance from historic landfill use, capping, and routine vegetation maintenance activities. As a result, the Project will not result in a significant adverse impact to the existing Open Field habitat. The Project will generally retain this Open Field habitat post-construction between and under the proposed solar panels, excepting for the concrete ballast supports.

#### **Edge Forest**

Edge Forest habitat exists generally around the Open Field habitat, particularly along the southern and western portions of the Site, and serves as transitional ecotone between the Open Field and wetland forested habitats associated with the Riparian habitat. The Edge Forest habitat is characterized by mature even-aged hardwood forest and a dense shrub layer. In combination with the adjacent wetland forested habitats, it forms a contiguous forested block. The Edge Forest habitat differs from those adjacent areas by occurring entirely within well-drained upland areas and consisting of a significantly different vegetative species composition. Dominant species within the Edge Forest habitat include red oak (*Quercus rubra*) sugar maple (*Acer saccharum*) with areas of black cherry (*Prunus serotina*), black birch (*Betula lenta*), and red maple (*Acer rubrum*). A moderately dense understory is dominated by

bush honeysuckle, witch hazel (*Hamamelis virginiana*), multiflora rose (*Rosa multiflora*), spicebush (*Lindera benzoin*), and Japanese barberry (*Berberis thundergii*). The forest floor consists of hayscented fern (*Dennstaedtia punctilobula*), cinnamon fern (*Osmunda cinnamomea*), and Canada mayflower (*Maianthemum canadense*).

The Project does not involve any clearing and thus will have no impact to the Edge Forest habitat. \The proposed racking system will be installed on ballast footings to avoid disturbance to the landfill cap. Any potential secondary short-term impacts during construction activities associated with the installation of the Facility entrance and concrete pads will be minimized by proper stabilization of any disturbed soils through strict adherence to the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control*.

#### **Riparian**

Riparian habitat occurs throughout the Site, occupying the western and southern extents. Details of this Riparian habitat are provided in Section 3.2.1. The on-Site wetland consists of a large complex riparian system with diverse hydrology, morphology and vegetative communities. Intermittently flooded backwater riparian areas border the two perennial watercourses and consist of complexes of mature forest, emergent, and scrub/shrub habitats. Evidence of some filled/altered areas along the jurisdictional wetland boundaries appear within this complex as observed by colluvial deposits overlying alluvial material.

No permanent direct impacts to Riparian habitat are proposed from the development of the Facility, which will generally maintain a minimum  $\pm 190$ -foot setback from surrounding wetlands. There is no proposed mature vegetation clearing associated with the Facility and E&S control measures will be installed and maintained during construction activities to avoid potential secondary impacts to the Riparian habitat.

#### Developed

Developed areas are located in the northeastern portion of the Site fronting on Deming Road and consist of a parking lot, access road to the capped landfill, and gravel access road associated with the adjacent electrical transmission right-of-way. With the exception of installing the proposed electrical interconnection along Deming Road, no impacts to Developed areas will occur.

Table 1, *Habitat Areas* provides the total acreages of each habitat type located on the Site and within the Project Area.

**Table 2: Habitat Areas** 

Habitat Areas		
Habitat Type	Total Area On-Site	Area Occupied by Project
наысас туре	(±ac.)	(±ac.)
Open Field	13.87	4.8
Edge Forest	14.15	0.00
Riparian	10.75	0.00
Developed	4.64	0.22

#### 3.4.1 Core Forest Determination

The Project Area is fully cleared; no tree removal is required for development of the Project. Therefore, the Project will not affect core forest resources.

#### 3.4.2 Wildlife

Development of the Project will occur within portions of two (2) of the Site's four (4) habitats: Open Field and Developed areas. Open Field habitat areas currently provide limited value from a wildlife utilization standpoint as a result of routine vegetation management associated with the capped landfill and the relatively small patch-size (±13.87 ac) of this cool season grass habitat. Furthermore, the Project will not substantially change the character of this habitat type because the majority of underlying field vegetation will be retained. Therefore, Project-related impacts within this habitat would be limited and are not anticipated to result in a likely adverse effect to wildlife. The Developed area does not support wildlife habitat.

Based on the surrounding land uses, the adjacent Edge Forest located in proximity to the Project Area is likely utilized by species that prefer this habitat and are more tolerant of human disturbance and habitat fragmentation. Generalist wildlife species, including several song birds and mammals common throughout Connecticut, could be expected to use this area. Short-term wildlife impacts to this edge habitat due to construction-related noise may temporarily displace wildlife that are more sensitive to these types of disturbances. However, due to the relatively small size of this habitat patch, and given the abundance of higher quality habitat surrounding

the Site (e.g., Riparian Forest) which wildlife could move into during construction activities, the Project is not anticipated to result in a significant impact to wildlife.

The Project Area will not encroach into the southern/western Riparian habitats. Project development will occur entirely within Developed and Open Field areas. In addition, the Project is buffered from the nearby Riparian habitats by the intervening Edge Forest habitat. As a result, wildlife utilization within the Riparian aquatic habitats is expected to continue relatively uninterrupted. Noise and associated human activities during construction may result in limited, temporary disruption to wildlife using nearby Riparian habitat, although as previously discussed, such temporary impacts would be more likely to occur to the Edge Forest habitat. Any temporarily displaced wildlife are expected to relocate into similar adjacent wetland habitats to the south and west. Post construction, operation of the Facility will not result in a likely adverse effect to wildlife using these habitats since the Facility is unoccupied and would not generate any significant noise or traffic.

#### 3.5 Rare Species

APT reviewed publicly available information 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, the DEEP also developed maps to serve as a pre-screening tool to help Petitioners 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. These data are 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 landowner's rights whenever species occur on private property.

APT reviewed the most recent DEEP NDDB mapping (August 2022), which revealed that an NDDB polygon encompasses the majority of the Site. Because state-listed species or communities are documented on or in the vicinity of the Site, consultation with NDDB was performed. A response was received from NDDB on October 13, 2022 (NDDB Determination No. 202210240) indicating negative impacts to State-listed species (RCSA Sec. 26-306) resulting from the proposed activity are not anticipated; a copy of the letter is provided in Appendix B, *USFWS and NDDB Compliance Statement*.

#### 3.5.2 USFWS Consultation

Federal consultation was completed in accordance with Section 7 of the Endangered Species Act through the U.S. Fish and Wildlife Service's ("USFWS") Information, Planning, and Conservation System ("IPaC"). Based on the results of the IPaC review, one federally-listed<sup>4</sup> threatened species is known to occur in the vicinity of the Site, northern long-eared bat ("NLEB"; *Myotis septentrionalis*). The NLEB's range encompasses the entire State of Connecticut and suitable NLEB roost habitat includes trees (live, dying, dead, or snag) with a diameter at breast height ("DBH") of three (3) inches or greater.

APT reviewed the DEEP's publicly available *Northern long-eared bat areas of concern in Connecticut to assist with Federal Endangered Species Act Compliance* map (February 1, 2016) to determine the locations of any known maternity roost trees or hibernaculum 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 Morris, approximately 20.7 miles to the west.

APT completed a determination of compliance with Section 7 of the Endangered Species Act of 1973 for the Project. In compliance with the USFWS criteria for assessing NLEB, the Project will not likely result in an adverse effect or incidental take<sup>5</sup> of NLEB and does not require a permit

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<sup>&</sup>lt;sup>4</sup> Listing under the federal Endangered Species Act

<sup>&</sup>lt;sup>5</sup> "Incidental take" is defined by the Endangered Species Act as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." For example, harvesting trees can kill bats that are roosting in the trees, but the purpose of the activity is not to kill bats.

from USFWS. A USFWS letter dated July 26, 2022 confirmed compliance; thus, no further consultation with USFWS is required for the proposed activity. <sup>6</sup>

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

#### 3.6 Soils and Geology

Surficial materials on the Site are classified as deposits of sand and gravel overlying fines. However, portions of the Site have been historically utilized as a landfill and prolonged disturbance to and filling of the original soil profile has occurred. The Project Area now consists of fine clays and imported material utilized to cap the closed landfill. Due to the requirement to protect the landfill cap, no penetrations of the ground surface are associated with the proposed development. Bedrock beneath the Site 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. Grades eastward into coarse conglomerate (fanglomerate). C-TEC does not anticipate encountering bedrock during Project development.

#### 3.6.1 Prime Farmland Soils

Pursuant to 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 Guide<sup>7</sup>, no Prime Farmland Soils are found within the Project Area. See Figure 2, *Existing Conditions Map*.

#### 3.7 Historic and Archaeological Resources

At the request of APT, and on behalf of C-TEC, Heritage Consultants, LLC ("Heritage") reviewed relevant historic and archaeological information to determine whether the Site holds potential historic or cultural resource significance. Their review of historic maps and aerial images of the

<sup>&</sup>lt;sup>6</sup> It should be noted that, since issuance of the letter, the USFWS published a proposal to reclassify the NLEB as Endangered under the Endangered Species Act. The proposed reclassification, if finalized, is anticipated to take effect by December 30, 2022. It is possible that the Project would be subject to additional review through a formal procedure that has yet to be established.

<sup>&</sup>lt;sup>7</sup> Connecticut Environmental Conditions Online (CTECO) Resource Guide, <u>www.cteco.uconn.edu</u>.

Site, examination of files maintained by the Connecticut State Historic Preservation Office ("SHPO"), and a pedestrian survey of the Site revealed one (1) National Register of Historic Places ("NRHP") listing located within 1.0 mile of the Site. Five State Register of Historic Places properties are located within 1.0 mile of the Site. Due to their distances from the Site, there will be no effect on any of those resources. In a report dated September 6, 2022, Heritage determined due to the existing disturbed nature of the Site, "no nearby cultural resources will be impacted negatively by the proposed construction" and "no further investigation of the project area is recommended prior to construction". SHPO concurred in a letter dated October 28, 2022, stating that "no additional archeological investigations are warranted and that no historic properties will be affected by the proposed solar project."

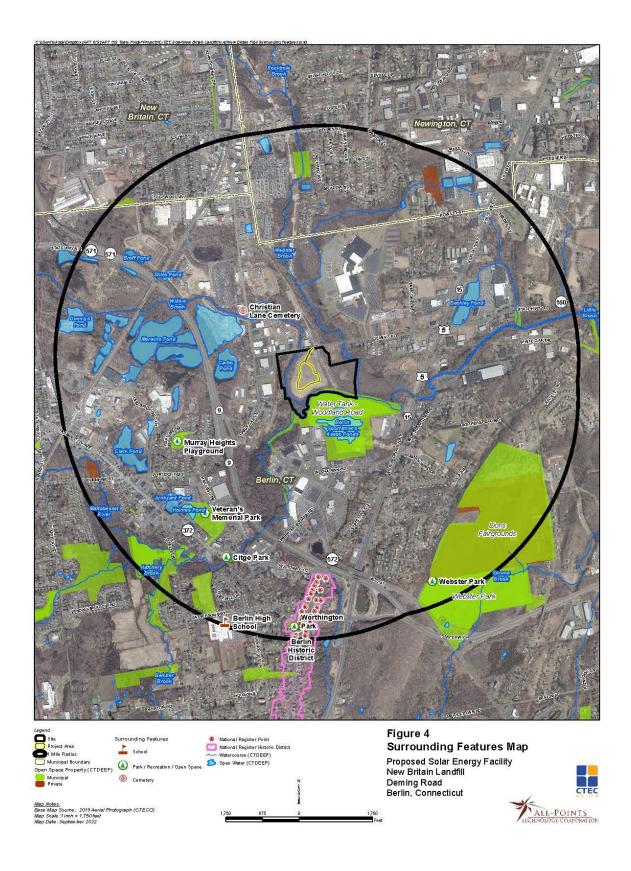
The Heritage report and the SHPO response are included in Appendix C, Cultural Resources Review.

#### 3.8 Scenic and Recreational Areas

No state or local designated scenic roads or scenic areas are located near or within one (1) mile of the Site and therefore none will be physically or visually impacted by development of the Project.

There are no Connecticut Blue Blaze Hiking Trails located proximate to the Site. Town of Berlin open space is located across the Mattabesset River just south of the Site identified as the "Water Tank – Woodland Road Municipal Open Space." The Project will have no effect on this resource.

See Figure 4, *Surrounding Features Map,* for these and other resources located within one mile of the Project Area.



#### 3.9 Noise

The Site contains a landfill and associated infrastructure. Noise associated with human activities is currently generated on the Site.

Construction noise is exempted under State of Connecticut regulations for the control of noise, RCSA 22a-69-1.8(h). The Town noise ordinance regulates the time in which construction activity may be conducted to between 7:00 a.m. and 8:00 p.m. Monday through Saturday and noon to 6:00 p.m. on Sunday. During construction of the Facility, the temporary increase in noise would likely raise localized ambient sound levels immediately surrounding the Project Area. Standard types of construction equipment would be used for the Project. In general, the highest noise level from this type of equipment (e.g., backhoe, bulldozer, crane, trucks, etc.) is approximately 88 dBA at the source.

Once operational, noise from the Facility will be minimal; the Facility's only noise generating equipment are the inverters and transformers. Based on the most conservative information provided by equipment manufacturers, the loudest piece of equipment could be a 100/125kW, 1500Vdc String Inverter that will generate a maximum sound level of approximately 65 dBA measured at one (1) meter away.

The Site is located within a general industrial zoning district and the Facility would be considered a Class C (Industrial) noise emitter. The nearest off-Site property line from the inverters and transformer is ±329 feet to the north-northwest, a residential property at 131 Deming Road. The nearest residence is located ±221 feet to the northwest at 604 Berlin Turnpike. Both residential properties would be considered a Class A Noise Receptor Zone.<sup>8</sup> As such, noise standards of 61 dBA during the daytime and 51 dBA at night apply.

APT applied the Inverse Square Law<sup>9</sup> to evaluate the relative sound level of the inverters at the nearest property lines. Based on these calculations, nearby receptors are of sufficient distances from the proposed Project-related equipment and noise levels during Facility operation will be below 51 dBA at surrounding property lines.

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<sup>&</sup>lt;sup>8</sup> RCSA 22a-69-3.5. Noise Zone Standards

<sup>&</sup>lt;sup>9</sup> Inverse Square Law states that *the intensity of a force is inversely proportional to the square of the distance from that force*. With respect to sound, this means that any a noise will have a drastic drop-off in volume as it moves away from the source and then shallows out.

Please refer to the transformer and inverter specification sheets provided in Appendix D, *Product Information Sheets*.

#### 3.10 Lighting

No lighting currently exists on the Site although a street light is located at the Site entrance off Deming Road. No exterior lighting is planned for the Project.

#### 3.11 FAA Determination

C-TEC submitted relevant Project information to the Federal Aviation Administration ("FAA") for an aeronautical study to evaluate potential hazards to air navigation. The nearest airport is the Robertson Airport located approximately 6.2 miles to the southeast. The FAA provided Determinations of No Hazard to Air Navigation on September 30, 2022. See Appendix E, FAA Determinations. Based on this determination, there is no need to conduct a glare analysis.

#### 3.12 Visibility

The Facility will consist of 3,228 non-reflective solar panels measuring approximately 8 feet above grade. The proposed electrical interconnection will require the installation of four (4) new utility poles in the northcentral area of the Site off the landfill adjacent to Deming Road.

The solar modules are designed to absorb incoming solar radiation and minimize reflectivity, such that only a small percentage of incidental light will be reflected off the panels. This incidental light is significantly less reflective than common building materials, such as steel, or the surface of smooth water. The panels will be tilted up toward the southern sky, thereby further reducing reflectivity.

APT assessed the predicted visibility of the Facility with a Project-specific computer analysis of a one-mile radius around the Site. As depicted on the resulting viewshed maps, year-round visibility of the proposed Facility is limited to the Site itself, with limited views potentially extending to areas directly north of the Site across Deming Road. Seasonal visibility may be experienced along portions of Deming Road west and east of the Site at distances up to 0.25 mile away. The incremental impact on views is not anticipated to be significant.

Please see Appendix F, *Visibility Documentation* for viewshed maps.

### 4 Conclusion

As demonstrated in this Environmental Assessment, 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.

The Project Area is cleared as a result of the maintained capped landfill; no vegetative removal is required for development of the Project. Therefore, it will have no significant impact on existing habitats and wildlife. The northern long-eared bat was identified as potentially occurring within the vicinity of the Site but the Project is not expected to result in an adverse effect or an incidental take since no tree clearing would occur. The Project Area contains no Prime Farmland Soils or Core Forest.

Once operative, the Facility will be unstaffed and generate minimal traffic.

Predicted visibility of the proposed Facility is limited to a small segment along Deming Road that has an existing view of the landfill.

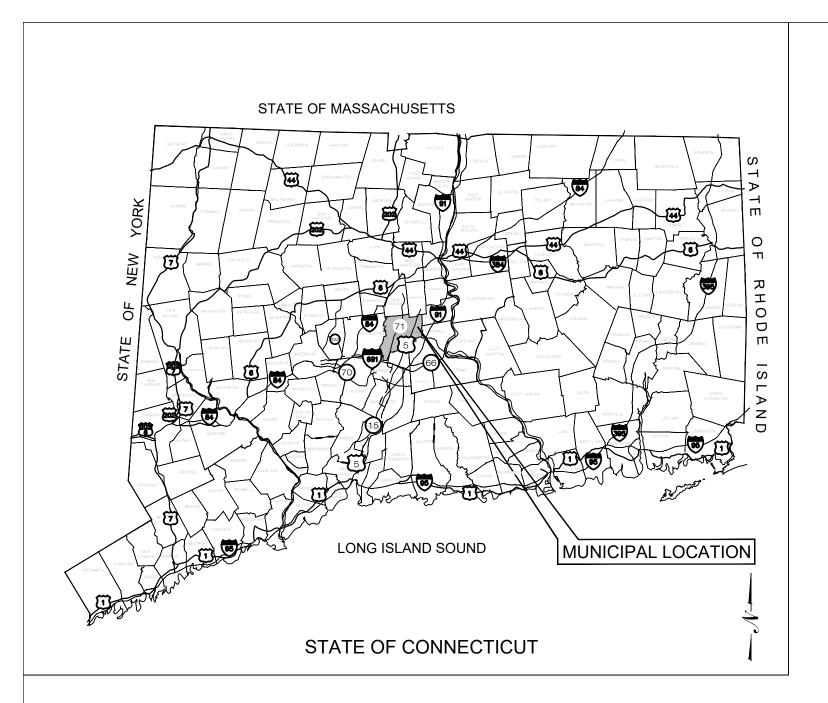
The Facility will comply with State and local noise regulations and have no noticeable impact on nearby residences or surrounding properties.

There are no impacts, direct or indirect, to wetlands. The nearest wetland boundary to the Project Area is  $\pm 190$  feet away. E&S controls will be installed and maintained throughout constructions. The distance from the Facility to wetlands and implementation of protective management techniques will mitigate potential impacts to these resources during construction.

Implementation of the Project avoids grading and excavation. The Project will be located on existing impervious surface; therefore, no change to existing water volume measures is required. Project plans include provisions for monitoring of development activities and the establishment of E&S controls to be installed and maintained throughout construction in accordance with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control*.

## **APPENDIX A**

## PROJECT PLANS



## C-TEC SOLAR, LLC

## "NEW BRITAIN LANDFILL SOLAR"

## **DEMING ROAD** BERLIN, CT

## LIST OF DRAWINGS

T-1 TITLE SHEET & INDEX

1 OF 1 PROPERTY & TOPOGRAPHIC SURVEY PROVIDED BY MARTIN SURVEYING ASSOCIATES, LLC

**GN-1 GENERAL NOTES** 

**OP-1 OVERALL LOCUS MAP** 

**EC-1 SEDIMENTATION & EROSION CONTROL NOTES** 

EC-2 SEDIMENTATION & EROSION CONTROL DETAILS

EC-3 SEDIMENTATION & EROSION CONTROL PLAN

SP-1 SITE & UTILITY PLAN

SP-2 SITE & UTILITY PLAN

**DN-1 SITE DETAILS** 

## SITE INFORMATION

SITE NAME: "NEW BRITAIN LANDFILL SOLAR"

LOCATION: DEMING ROAD

SITE TYPE/DESCRIPTION: ADD (1) BALLAST MOUNTED SOLAR PANEL

PROPERTY OWNER: CITY OF NEW BRITAIN

WEST MAIN STREET

NEW BRITAIN, CT 06051

APPLICANT: C-TEC SOLAR, LLC 1 GRIFFIN RD SOUTH, SUITE 200

BLOOMFIELD, CT 06002

ENGINEER CONTACT: ROBERT C. BURNS, P.E.

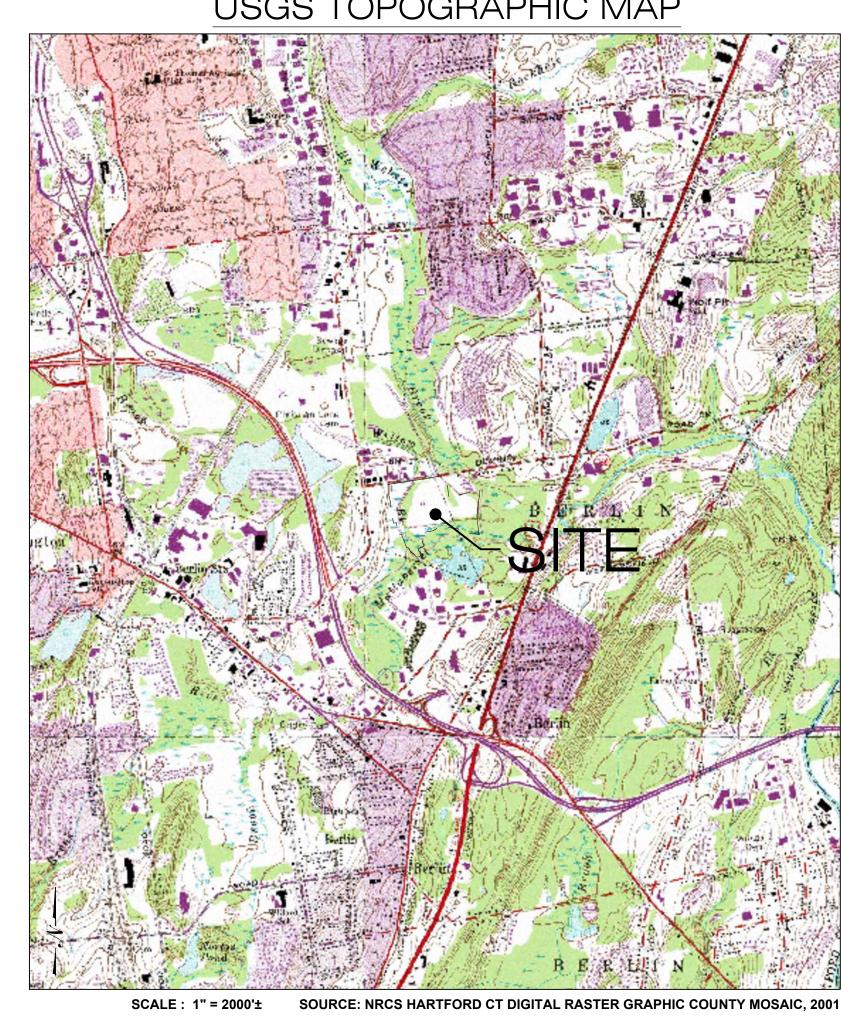
(860) 552-2036

LATITUDE: 41°38'17.42" N LONGITUDE: 72°44'42.75" W

MBLU: 10-1-83-2 ZONE: GI-2

TOTAL SITE ACREAGE: 43.40± AC. TOTAL DISTURBED AREA: 5.02± AC.

## USGS TOPOGRAPHIC MAP



BLOOMFIELD, CT 06002 OFFICE: (860)-580-7174



567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385 PHONE: (860)-663-1697

CSC PERMIT SET		
NO	DATE	REVISION
0	09/28/22	FOR REVIEW: RCB
1		
2		
3		
4		
5		
6		

DESIGN PROFESSIONAL OF RECORD

ADD: 567 VAUXHALL STREET WATERFORD, CT 06385

OWNER: CITY OF NEW BRITAIN ADDRESS: WEST MAIN STREET NEW BRITAIN, CT 06051

NEW BRITAIN LANDFILL SOLAR

SITE DEMING ROAD ADDRESS: BERLIN, CT

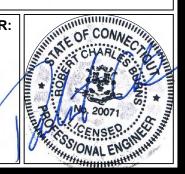
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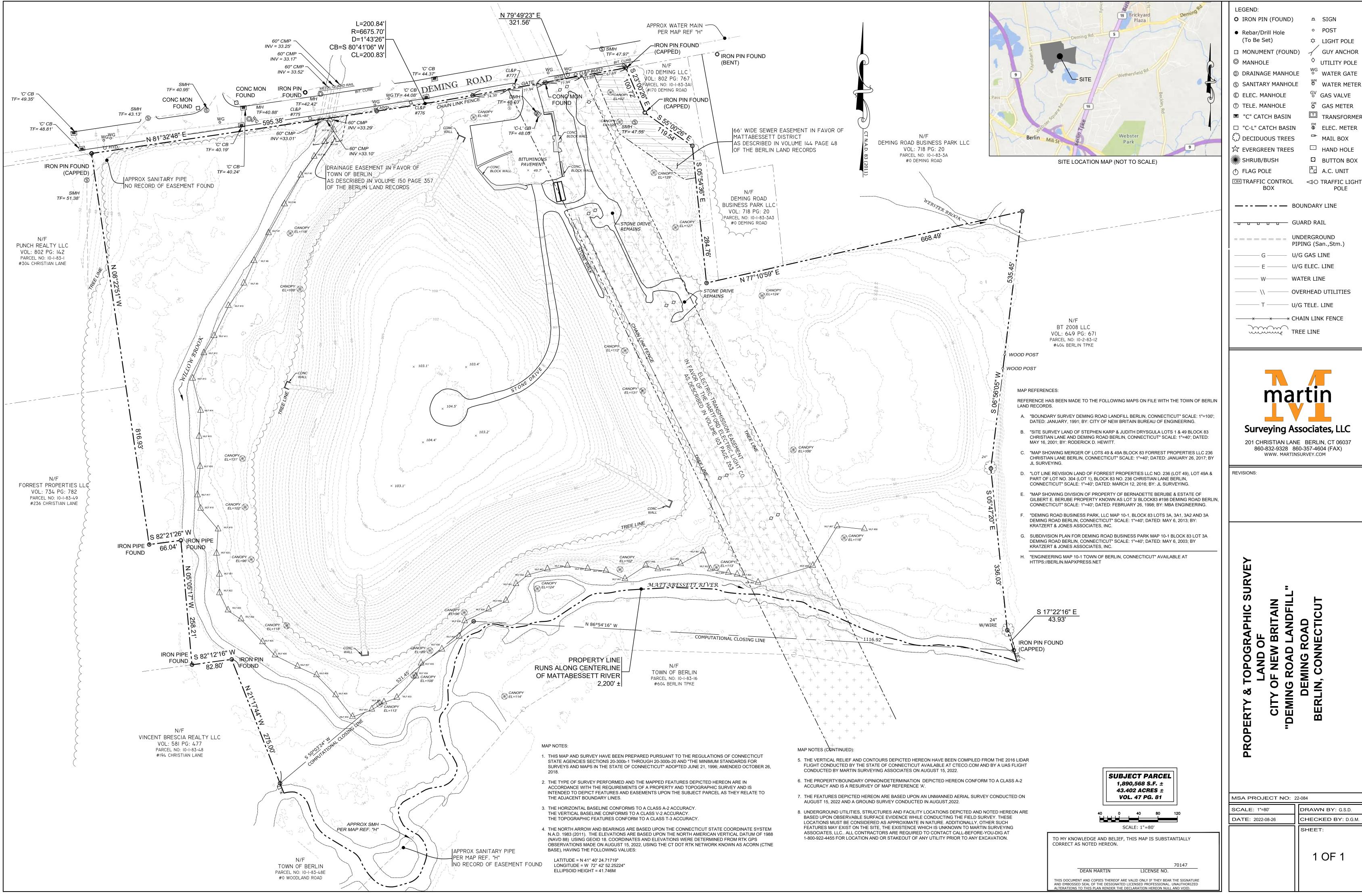
DRAWN BY: JT DATE: 09/28/22 CHECKED BY: RCB

SHEET TITLE:

TITLE SHEET & INDEX

SHEET NUMBER:





TRANSFORMER

## **GENERAL NOTES**

- ALL CONSTRUCTION SHALL COMPLY WITH PROJECT DEVELOPER STANDARDS, TOWN OF BERLIN STANDARDS, CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS IN THE ABOVE REFERENCED INCREASING HIERARCHY. IF SPECIFICATIONS ARE IN CONFLICT, THE MORE STRINGENT SPECIFICATION SHALL APPLY.
- IF NO PROJECT CONSTRUCTION SPECIFICATION PACKAGE IS PROVIDED BY THE PROJECT DEVELOPER OR THEIR REPRESENTATIVE, THE CONTRACTOR SHALL COMPLY WITH THE MANUFACTURER, TOWN OF BERLIN, OR CONNECTICUT DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, AND BE 3. IN ACCORDANCE WITH ALL APPLICABLE OSHA, FEDERAL, STATE AND LOCAL REGULATIONS.
- THE PROJECT DEVELOPER IS RESPONSIBLE FOR OBTAINING ALL NECESSARY ZONING AND STORMWATER PERMITS REQUIRED BY GOVERNMENT AGENCIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL OBTAIN ALL TOWN OF BERLIN CONSTRUCTION PERMITS. THE CONTRACTOR SHALL POST ALL BONDS, PAY ALL FEES, PROVIDE PROOF OF INSURANCE AND PROVIDE TRAFFIC CONTROL NECESSARY FOR THIS WORK.
- REFER TO PLANS, DETAILS AND REPORTS PREPARED BY ALL-POINTS TECHNOLOGY CORPORATION FOR ADDITIONAL INFORMATION. THE CONTRACTOR SHALL VERIFY ALL SITE CONDITIONS IN THE FIELD AND CONTACT THE PROJECT DEVELOPER IF THERE ARE ANY QUESTIONS OR CONFLICTS REGARDING THE CONSTRUCTION DOCUMENTS AND/OR FIELD CONDITIONS SO THAT APPROPRIATE REVISIONS CAN BE MADE PRIOR TO BIDDING/CONSTRUCTION. ANY CONFLICT BETWEEN THE DRAWINGS AND SPECIFICATIONS SHALL BE CONFIRMED WITH THE PROJECT DEVELOPERS CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL PRODUCTS, MATERIALS PER PLANS, AND 6. SPECIFICATIONS TO THE PROJECT DEVELOPER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION OR DELIVERY TO THE SITE. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- SHOULD ANY UNKNOWN OR INCORRECTLY LOCATED EXISTING PIPING OR OTHER UTILITY BE UNCOVERED DURING EXCAVATION, CONSULT THE PROJECT DEVELOPER IMMEDIATELY FOR DIRECTIONS BEFORE PROCEEDING FURTHER WITH WORK IN THIS AREA.
- DO NOT INTERRUPT EXISTING UTILITIES SERVICING FACILITIES OCCUPIED AND USED BY THE PROJECT DEVELOPER OR OTHERS DURING OCCUPIED HOURS, EXCEPT WHEN SUCH INTERRUPTIONS HAVE BEEN AUTHORIZED IN WRITING BY THE PROJECT DEVELOPER AND THE LOCAL MUNICIPALITY. INTERRUPTIONS SHALL ONLY OCCUR AFTER ACCEPTABLE TEMPORARY SERVICE HAS BEEN PROVIDED.
- THE CONTRACT LIMIT IS THE PROPERTY LINE UNLESS OTHERWISE SPECIFIED OR SHOWN ON THE CONTRACT DRAWINGS.
- THE CONTRACTOR SHALL ABIDE BY ALL OSHA, FEDERAL, STATE AND LOCAL REGULATIONS WHEN OPERATING CRANES, BOOMS, HOISTS, ETC. IN CLOSE PROXIMITY TO OVERHEAD ELECTRIC LINES. IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO ELECTRIC LINES, CONTACT POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS. ANY UTILITY COMPANY FEES SHALL BE PAID FOR BY THE CONTRACTOR.
- 10. THE CONTRACTOR SHALL COMPLY WITH OSHA CFR 29 PART 1926 FOR EXCAVATION TRENCHING AND TRENCH PROTECTION REQUIREMENTS.
- 1. THE ENGINEER IS NOT RESPONSIBLE FOR SITE SAFETY MEASURES TO BE EMPLOYED DURING CONSTRUCTION. THE ENGINEER HAS NO CONTRACTUAL DUTY TO CONTROL THE SAFEST METHODS OR MEANS OF THE WORK, JOB SITE RESPONSIBILITIES, SUPERVISION OF PERSONNEL OR TO SUPERVISE SAFETY AND DO NOT VOLUNTARILY ASSUME ANY SUCH DUTY OR RESPONSIBILITY
- 12. THE CONTRACTOR SHALL RESTORE ANY DRAINAGE STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, LANDSCAPED AREAS OR SIGNAGE DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL CONDITION OR BETTER, AS APPROVED BY THE PROJECT DEVELOPER OR TOWN OF
- 13. THE CONTRACTOR SHALL PROVIDE AS-BUILT RECORDS OF ALL CONSTRUCTION (INCLUDING UNDERGROUND UTILITIES) TO THE PROJECT DEVELOPER AT THE END OF CONSTRUCTION.
- 14. ALTERNATIVE METHODS AND PRODUCTS, OTHER THAN THOSE SPECIFIED, MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENC' PRIOR TO INSTALLATION DURING THE BIDDING/CONSTRUCTION PROCESS.
- 15. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE SYSTEMS HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE SYSTEMS ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE AND THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE SYSTEMS INCLUDING SERVICES. PRIOR TO DEMOLITION OR CONSTRUCTION, THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" 72 HOURS BEFORE COMMENCEMENT OF WORK AT "811" AND VERIFY ALL UTILITY AND STORM DRAINAGE SYSTEM LOCATIONS.
- 6. NO CONSTRUCTION OR DEMOLITION SHALL BEGIN UNTIL APPROVAL OF THE FINAL PLANS AND PERMITS ARE GRANTED BY ALL GOVERNING AND REGULATORY AGENCIES.

## **SITE PLAN NOTES**

THE SURVEY WAS PROVIDED BY MARTIN SURVEYING ASSOCIATES, LLC. DATED AUGUST 26, 2022.

- 2. THERE ARE BORDERING VEGETATED WETLANDS (BVW/S) LOCATED ON THE SITE AS INDICATED ON THE PLANS. BVW BOUNDARIES WERE FLAGGED AND LOCATED BY ALL-POINTS TECHNOLOGY CORPORATION, IN AUGUST 2022.
- THERE WILL BE MINIMAL GRADING ON SITE IN THE AREAS OF THE MINOR CLEARING, TO ENSURE THAT 3. UTILITY LOCATIONS AND PENETRATIONS ARE SHOWN FOR THE CONTRACTOR'S INFORMATION AND PROPER DRAINAGE IS MAINTAINED.
- 4. THE CONTRACTOR SHALL FOLLOW THE RECOMMENDED SEQUENCE OF CONSTRUCTION NOTES PROVIDED ON THE EROSION CONTROL PLAN OR SUBMIT AN ALTERNATE PLAN FOR APPROVAL BY THE ENGINEER AND/OR PERMITTING AGENCIES PRIOR TO THE START CONSTRUCTION. ALLOW A MINIMUM OF 14 WORKING DAYS FOR REVIEW.
- PROPER CONSTRUCTION PROCEDURES SHALL BE FOLLOWED ON ALL IMPROVEMENTS WITHIN THIS PARCEL SO AS TO PREVENT THE SILTING OF ANY WATERCOURSE OR BVWS IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REGULATIONS. IN ADDITION, THE CONTRACTOR SHALL ADHERE TO THE "EROSION CONTROL PLAN" CONTAINED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO POST ALL BONDS AS REQUIRED BY GOVERNMENT AGENCIES WHICH WOULD GUARANTEE THE PROPER IMPLEMENTATION OF THE PLAN.
- ALL SITE WORK, MATERIALS OF CONSTRUCTION, AND CONSTRUCTION METHODS FOR EARTHWORK AND STORM DRAINAGE WORK, SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS AND APPLICABLE SECTIONS OF THE PROJECT SPECIFICATIONS MANUAL. OTHERWISE THIS WORK SHALL CONFORM TO THE STATE OF CONNECTICUT DEPARTMENT OF TRANSPORTATION AND PROJECT GEOTECHNICAL REPORT IF THERE IS NO PROJECT SPECIFICATIONS MANUAL. ALL FILL MATERIAL UNDER STRUCTURES AND PAVED AREAS SHALL BE PER THE ABOVE STATED APPLICABLE SPECIFICATIONS, AND/OR PROJECT GEOTECHNICAL REPORT, AND SHALL BE PLACED IN ACCORDANCE WITH THE APPLICABLE SPECIFICATIONS UNDER THE SUPERVISION OF A QUALIFIED PROFESSIONAL ENGINEER. MATERIAL SHALL BE COMPACTED IN 8" LIFTS TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D 1557 AT 95% PERCENT OF OPTIMUM MOISTURE CONTENT.
- ALL DISTURBANCE INCURRED TO PUBLIC, MUNICIPAL, COUNTY, STATE PROPERTY DUE TO CONSTRUCTION SHALL BE RESTORED TO ITS PREVIOUS CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF BERLIN AND STATE OF CONNECTICUT.
- 8. IF IMPACTED OR CONTAMINATED SOIL IS ENCOUNTERED BY THE CONTRACTOR, THE CONTRACTOR SHALL SUSPEND EXCAVATION WORK OF IMPACTED SOIL AND NOTIFY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT PRIOR TO PROCEEDING WITH FURTHER WORK IN THE IMPACTED SOIL LOCATION UNTIL FURTHER INSTRUCTED BY THE PROJECT DEVELOPER AND/OR PROJECT DEVELOPER'S ENVIRONMENTAL CONSULTANT.

### **UTILITY NOTES**

- CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE TOWN OF BERLIN TO SECURE CONSTRUCTION PERMITS AND FOR PAYMENT OF FEES FOR STREET CUTS AND CONNECTIONS TO EXISTING UTILITIES.
- REFER TO DRAWINGS BY PROJECT DEVELOPER FOR THE ONSITE ELECTRICAL DRAWINGS AND INTERCONNECTION TO EXISTING ELECTRICAL GRID. SITE CONTRACTOR SHALL SUPPLY AND INSTALL PIPE ADAPTERS AS NECESSARY AT BUILDING CONNECTION POINT OR AT EXISTING UTILITY OR PIPE CONNECTION POINT. THESE DETAILS ARE NOT INCLUDED IN THESE PLANS.
- SHALL BE VERIFIED WITH THE ELECTRICAL ENGINEER AND THE PROJECT DEVELOPER'S CONSTRUCTION MANAGER PRIOR TO THE START OF CONSTRUCTION
- 4. THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY THE ELEVATION AND LOCATION OF ALL UTILITIES BY VARIOUS MEANS PRIOR TO BEGINNING ANY EXCAVATION. TEST PITS SHALL BE DUG AT ALL LOCATIONS WHERE PROP. SANITARY SEWERS AND WHERE PROP. STORM PIPING WILL CROSS EXISTING UTILITIES, AND THE HORIZONTAL AND VERTICAL LOCATIONS OF THE UTILITIES SHALL BE DETERMINED. THE CONTRACTOR SHALL CONTACT THE PROJECT DEVELOPER IN THE EVENT OF ANY DISCOVERED OR UNFORESEEN CONFLICTS BETWEEN EXISTING AND PROPOSED SANITARY SEWERS, STORM PIPING AND UTILITIES SO THAT AN APPROPRIATE MODIFICATION MAY BE MADE.
- UTILITY CONNECTION DESIGN AS REFLECTED ON THE PLAN MAY CHANGE SUBJECT TO UTILITY PROVIDER AND GOVERNING AUTHORITY STAFF REVIEW.
- 6. THE CONTRACTOR SHALL ENSURE THAT ALL UTILITY PROVIDERS AND GOVERNING AUTHORITY STANDARDS FOR MATERIALS AND CONSTRUCTION METHODS ARE MET. THE CONTRACTOR SHALL PERFORM PROPER COORDINATION WITH THE RESPECTIVE UTILITY PROVIDER.
- THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE WITH THE RESPECTIVE UTILITY PROVIDERS FOR SERVICE INSTALLATIONS AND CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WORK TO BE PERFORMED BY THE VARIOUS UTILITY PROVIDERS AND SHALL PAY ALL FEES FOR CONNECTIONS, DISCONNECTIONS, RELOCATIONS, INSPECTIONS, AND DEMOLITION UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATIONS MANUAL AND/OR GENERAL CONDITIONS OF THE CONTRACT.
- 8. ALL EXISTING PAVEMENT WHERE UTILITY PIPING IS TO BE INSTALLED SHALL BE SAW CUT. AFTER UTILITY INSTALLATION IS COMPLETED, THE CONTRACTOR SHALL INSTALL TEMPORARY AND/OR PERMANENT PAVEMENT REPAIR AS DETAILED ON THE DRAWINGS OR AS REQUIRED BY THE TOWN OF
- 9. ALL PIPES SHALL BE LAID ON STRAIGHT ALIGNMENTS AND EVEN GRADES USING A PIPE LASER OR OTHER ACCURATE METHOD.
- 10. RELOCATION OF UTILITY PROVIDER FACILITIES, SUCH AS POLES, SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE UTILITY PROVIDER.
- 11. THE CONTRACTOR SHALL COMPACT PIPE BACKFILL IN 8" LIFTS ACCORDING TO THE PIPE BEDDING DETAILS. TRENCH BOTTOM SHALL BE STABLE IN HIGH GROUNDWATER AREAS. A PIPE FOUNDATION SHALL BE USED PER THE TRENCH DETAILS AND IN AREAS OF ROCK EXCAVATION.
- 12. CONTRACTOR TO PROVIDE STEEL SLEEVES AND ANNULAR SPACE SAND FILL FOR UTILITY PIPE AND CONDUIT CONNECTIONS UNDER FOOTINGS.
- 13. ALL UTILITY CONSTRUCTION IS SUBJECT TO INSPECTION FOR APPROVAL PRIOR TO BACKFILLING, IN ACCORDANCE WITH THE APPROPRIATE UTILITY PROVIDER REQUIREMENTS.
- 14. A ONE-FOOT MINIMUM VERTICAL CLEARANCE BETWEEN WATER, GAS, ELECTRICAL, AND TELEPHONE LINES AND STORM PIPING SHALL BE PROVIDED. A SIX-INCH MINIMUM CLEARANCE SHALL BE MAINTAINED BETWEEN STORM PIPING AND SANITARY SEWER. A 6-INCH TO 18-INCH VERTICAL CLEARANCE BETWEEN SANITARY SEWER PIPING AND STORM PIPING SHALL REQUIRE CONCRETE ENCASEMENT OF THE SANITARY PIPING.
- 15. THE CONTRACTOR SHALL RESTORE ANY UTILITY STRUCTURE, PIPE, CONDUIT, PAVEMENT, CURBING, SIDEWALKS, DRAINAGE STRUCTURE, SWALE OR LANDSCAPED AREAS DISTURBED DURING CONSTRUCTION, TO THEIR ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE PROJECT DEVELOPER AND TOWN OF BERLIN.
- 16. INFORMATION ON EXISTING UTILITIES AND STORM DRAINAGE HAS BEEN COMPILED FROM AVAILABLE INFORMATION INCLUDING UTILITY PROVIDER AND MUNICIPAL RECORD MAPS AND/OR FIELD SURVEY. AND IS NOT GUARANTEED CORRECT OR COMPLETE. UTILITIES AND STORM DRAINAGE ARE SHOWN TO ALERT THE CONTRACTOR TO THEIR PRESENCE. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR DETERMINING ACTUAL LOCATIONS AND ELEVATIONS OF ALL UTILITIES AND STORM DRAINAGE INCLUDING SERVICES. CONTACT "CALL BEFORE YOU DIG" AT 811 72 HOURS PRIOR TO CONSTRUCTION AND VERIFY ALL UNDERGROUND AND OVERHEAD UTILITY AND STORM DRAINAGE LOCATIONS. THE CONTRACTOR SHALL EMPLOY THE USE OF A UTILITY LOCATING COMPANY TO PROVIDE SUBSURFACE UTILITY ENGINEERING CONSISTING OF DESIGNATING UTILITIES AND STORM PIPING ON PRIVATE PROPERTY WITHIN THE CONTRACT LIMIT AND CONSISTING OF DESIGNATING AND LOCATING WHERE PROP. UTILITIES AND STORM PIPING CROSS EXISTING UTILITIES AND STORM PIPING WITHIN THE CONTRACT LIMITS.
- 17. THE CONTRACTOR SHALL ARRANGE AND COORDINATE WITH UTILITY PROVIDERS FOR WORK TO BE PERFORMED BY UTILITY PROVIDERS. THE CONTRACTOR SHALL PAY ALL UTILITY FEES UNLESS OTHERWISE STATED IN THE PROJECT SPECIFICATION MANUAL AND GENERAL CONDITIONS, AND REPAIR PAVEMENTS AS NECESSARY.
- 18. ELECTRIC DRAWINGS AND REQUIREMENTS ARE NOT INCLUDED AS PART OF THIS DRAWING SET AND SHOULD BE OBTAINED FROM THE PROJECT DEVELOPER.
- 19. ALTERNATIVE METHODS AND PRODUCTS OTHER THAN THOSE SPECIFIED MAY BE USED IF REVIEWED AND APPROVED BY THE PROJECT DEVELOPER, ENGINEER, AND APPROPRIATE REGULATORY AGENCIES PRIOR TO INSTALLATION.
- 20. THE CONTRACTOR SHALL MAINTAIN ALL FLOWS AND UTILITY CONNECTIONS TO EXISTING BUILDINGS WITHOUT INTERRUPTION UNLESS/UNTIL AUTHORIZED TO DISCONNECT BY THE PROJECT DEVELOPER, TOWN OF BERLIN, UTILITY PROVIDERS AND GOVERNING AUTHORITIES.

## **GENERAL LEGEND** PROPOSED **EXISTING** PROPERTY LINE BUILDING SETBACK SOLAR SETBACK EASEMENT •~~~~~ TREE LINE WETLAND WETLAND BUFFER VERNAL POOL **VERNAL POOL** BUFFER WATERCOURSE WATERCOURSE BUFFER MAJOR CONTOUR MINOR CONTOUR UNDERGROUND ——E ——E —— ELECTRIC OVERHEAD ELECTRIC GAS LINE WATER LINE \_\_\_\_w \_\_\_w \_\_\_ BASIN SWALE **FENCE** DISTURBANCE LIMIT OF CLEARING AND GRUBBING FILTER SOCK — FS —— FS —

SILT FENCE

BAFFLE

C-TECSOLAR 1 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002 OFFICE: (860)-580-7174



567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385 PHONE: (860)-663-169 WWW.ALLPOINTSTECH.COM FAX: (860)-663-093

**CSC PERMIT SET** NO DATE REVISION 0 09/28/22 FOR REVIEW: RCB 4 |

**DESIGN PROFESSIONAL OF RECORD** PROF: ROBERT C. BURNS, P.E. COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.

WATERFORD, CT 06385 OWNER: CITY OF NEW BRITAIN

ADDRESS: WEST MAIN STREET

**NEW BRITAIN, CT 06051** 

ADD: 567 VAUXHALL STREET

**NEW BRITAIN LANDFILL SOLAR** 

SITE DEMING ROAD ADDRESS: BERLIN, CT

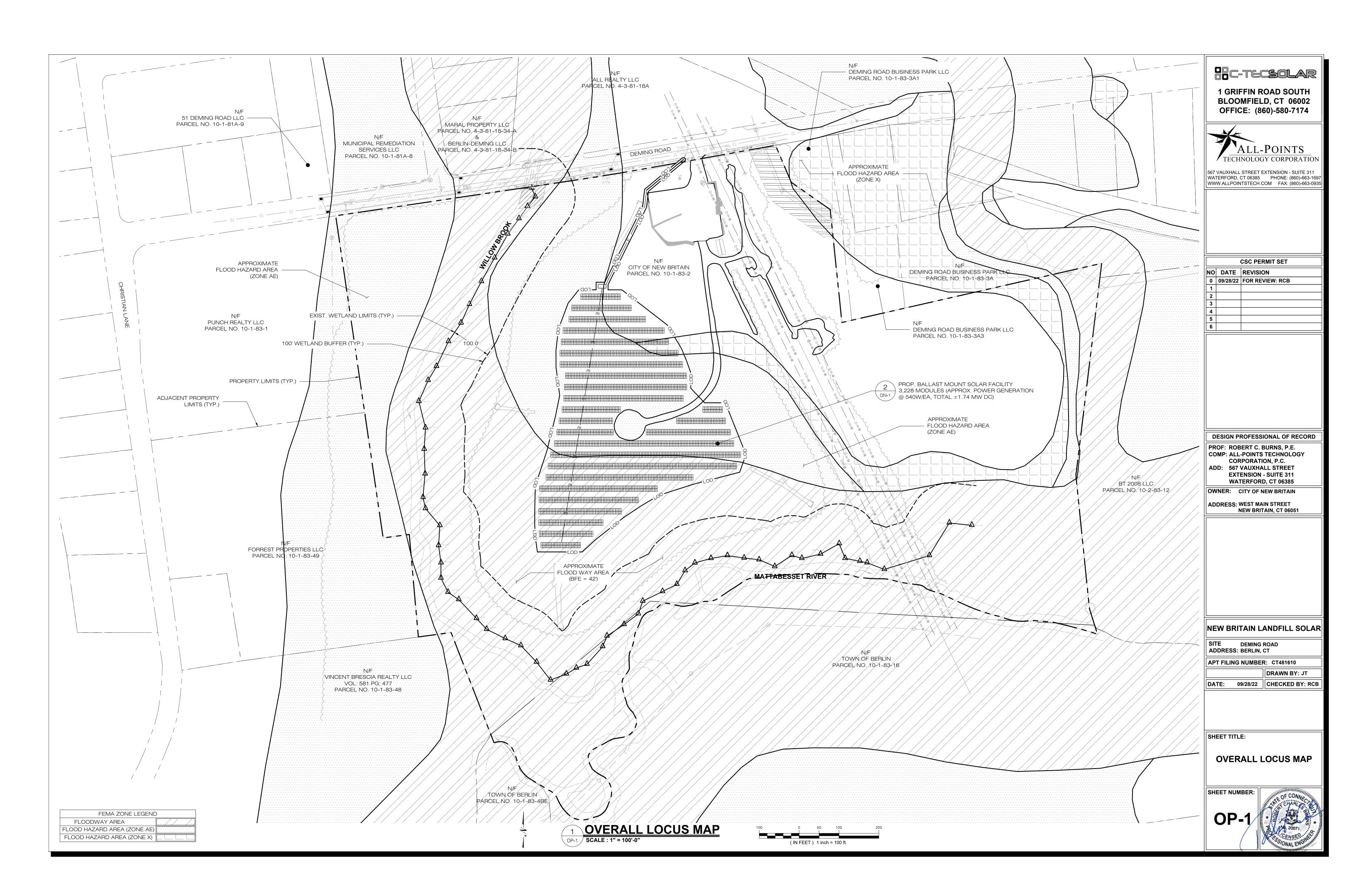
**APT FILING NUMBER: CT481610** 

DRAWN BY: JT DATE: 09/28/22 | CHECKED BY: RCB

**SHEET TITLE:** 

**GENERAL NOTES** 

SHEET NUMBER:



## **EROSION CONTROL NOTES**

EROSION AND SEDIMENT CONTROL PLAN NOTES

- 1. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF BERLIN, PERMITTEE, AND/OR SWPCP MONITOR. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.
- 2. THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. SEE CONSTRUCTION SEQUENCE FOR ADDITIONAL INFORMATION. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN AS REQUIRED BY THE ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCP MONITOR. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.
- 3. A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.
- 4. THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, SWPCP MONITOR, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANOR
- 6. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.
- 7. ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
- 8. PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.
- 9. CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXITING.
- 10. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER.
- 11. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
- 12. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE CONFORMING TO THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.
- 13. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.
- 14. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
- 15. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.
- 16. VEGETATIVE ESTABLISHMENT SHALL OCCUR ON ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION, IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.
- 17. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.
- 18. THE SITE WAS DESIGNED TO COMPLY WITH FEDERAL, STATE, AND, IF APPLICABLE, LOCAL STANDARDS, PLUS CURRENT ACCEPTED PRACTICES FOR THE INDUSTRY. ADDITIONAL CONTROLS AND ACTIVITIES MAY BE DEEMED NECESSARY BY THE SWPCP MONITOR DURING CONSTRUCTION AS A RESULT OF UNFORESEEN CONDITIONS AND/OR MEANS AND METHODS. SUCH ITEMS MAY INCLUDE, BUT ARE NOT LIMITED TO: ADDITIONAL FOREBAYS, BASINS, OR UPSTREAM STRUCTURAL CONTROLS, THE USE OF FLOCCULANTS OF FLOCK LOGS TO DECREASE SEDIMENT, DISCHARGE MANAGEMENT SUCH AS ADDITIONAL ARMORING AND FILTERING MEASURES (I.E. STRAW BALES, WATTLES, ETC.), AND HYDROSEEDING WITH RAPIDLY GERMINATING SEED.
- 19. SEEDING MIXTURES SHALL BE NEW ENGLAND SEMI-SHADE GRASS AND FORBS MIX, OR APPROVED EQUAL BY OWNER.

CONSTRUCTION OPERATION AND MAINTENANCE PLAN - BY CONTRACTOR		
E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
COMPOST FILTER SOCK	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED.
SILT FENCE	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED. REMOVE SILT WHEN IT REACHES 1/2 THE HEIGHT OF THE FENCE.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.
TEMPORARY SOIL PROTECTION	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR ERODED OR BARE AREAS IMMEDIATELY. RESEED AND MULCH.

- SEDIMENT & EROSION CONTROL NARRATIVE
- 1. THE PROJECT INVOLVES THE CONSTRUCTION OF A BALLAST MOUNTED SOLAR PANEL FACILITY WITH ASSOCIATED EQUIPMENT.

THE PROPOSED PROJECT INVOLVES THE FOLLOWING CONSTRUCTION:

- A. CLEARING, GRUBBING, AND GRADING OF EXISTING LOT.
- B. CONSTRUCTION OF 3,228 BALLAST MOUNTED SOLAR PANELS AND ASSOCIATED EQUIPMENT.
- B. THE STABILIZATION OF DISTURBED AREAS WITH PERMANENT VEGETATIVE TREATMENTS.
- 2. FOR THIS PROJECT, THERE ARE APPROXIMATELY 5.02± ACRES OF THE SITE BEING DISTURBED WITH NEGLIGIBLE INCREASE IN THE IMPERVIOUS AREA OF THE SITE, AS ALL ACCESS THROUGH THE SITE WILL BE GRAVEL. IMPERVIOUS AREAS ARE LIMITED TO THE CONCRETE PADS FOR ELECTRICAL EQUIPMENT. NO GROUND DISTURBANCE IS PROPOSED ON THE CAPPED LAND FILL.
- 3. THE PROJECT SITE, AS MAPPED IN THE SOIL SURVEY OF STATE OF CONNECTICUT (NRCS, VERSION 21, SEP 7, 2021), CONTAINS TYPE 302 (UN-RATED HYDROLOGIC SOIL GROUP) AND 308 (HYDROLOGIC SOIL GROUP C) SOILS. A GEOTECHNICAL ENGINEERING REPORT HAS NOT BEEN COMPLETED.
- 4. IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 3-4 MONTHS.
- 5. REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.
- 6. STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL AND THE TOWN OF BERLIN STANDARDS, TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE CONNECTICUT EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.
- 7. DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.
- 8. CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION:
- A. STAGED CONSTRUCTION;
  B. MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION;
- C. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT MEASURES AS SOON AS POSSIBLE, BUT NO LATER THAN 7-DAYS FOLLOWING DISTURBANCE;
- D. MINIMIZE IMPERVIOUS AREAS;
- E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.
- 9. THE FOLLOWING SEPARATE DOCUMENTS ARE TO BE CONSIDERED A PART OF THE EROSION AND SEDIMENTATION PLAN:
   A. DRAINAGE MEMO DATED OCTOBER 2022.
   B. SWPCP DATED OCTOBER 2022.

#### SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS. SHOULD THE CONTRACTOR ALTER THE CONSTRUCTION SEQUENCE OR ANY EROSION AND SEDIMENTATION CONTROL MEASURES THEY SHALL MODIFY THE STORMWATER POLLUTION CONTROL PLAN ("SWPCP") AS REQUIRED BY THE GENERAL PERMIT. MAJOR CHANGES IN SEQUENCING AND/OR METHODS MAY REQUIRE REGULATORY APPROVAL PRIOR TO IMPLEMENTATION.

- 1. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING. PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.
- 2. CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER REPRESENTATIVE(S), THE MUNICIPALITY, THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON, OR PERSONS, RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.
- 3. NOTIFY THE PROJECT DEVELOPER AND THE TOWN OF BERLIN AGENT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT.
- 4. NOTIFY DIG SAFE AT 811, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.
- 5. INSTALL STRAW WATTLES AS SHOWN ON THE EROSION AND SEDIMENTATION CONTROL PLANS
- 6. INSTALL ELECTRICAL CONDUIT TO SWITCH GEAR LOCATIONS.
- 7. INSTALL CABLE TRAY.
- 8. INSTALL STONE & FOUNDATIONS AS NEEDED FOR BALLAST MOUNTED RACKING SYSTEM.
- 9. INSTALL INVERTERS AND ELECTRICAL EQUIPMENT PAD.
- 10. INSTALL REMAINDER OF RACKING SYSTEM AND SOLAR MODULES.
- 11. AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE PERMITTEE AND TOWN OF BERLIN AGENT, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.
- 12. PERFORM PROJECT CLEAN UP.

1 GRIFFIN ROAD SOUTH BLOOMFIELD, CT 06002 OFFICE: (860)-580-7174



567 VAUXHALL STREET EXTENSION - SUITE 311 WATERFORD, CT 06385 PHONE: (860)-663-1697 WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CSC PERMIT SET

NO DATE REVISION

0 09/28/22 FOR REVIEW: RCB

1 2 3 4 5 6 6

DESIGN PROFESSIONAL OF RECORD

PROF: ROBERT C. BURNS, P.E.
COMP: ALL-POINTS TECHNOLOGY
CORPORATION, P.C.
ADD: 567 VAUXHALL STREET
EXTENSION - SUITE 311
WATERFORD, CT 06385

OWNER: CITY OF NEW BRITAIN
ADDRESS: WEST MAIN STREET

**NEW BRITAIN, CT 06051** 

NEW BRITAIN LANDFILL SOLAR

SITE DEMING ROAD ADDRESS: BERLIN, CT

APT FILING NUMBER: CT481610

DATE: 09/28/22 CHECKED BY: RCB

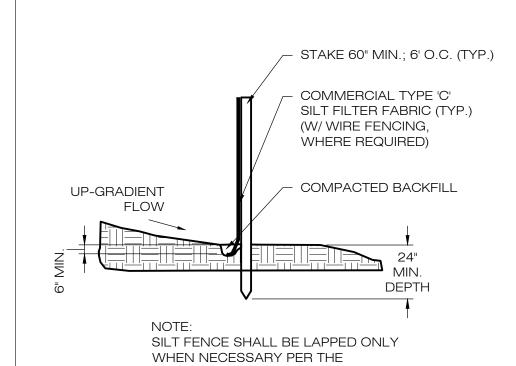
DRAWN BY: JT

SHEET TITLE:

SEDIMENTATION & EROSION CONTROL NOTES

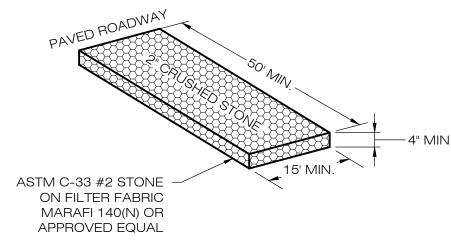
SHEET NUMBER:





MANUFACTURER RECOMMENDATIONS.

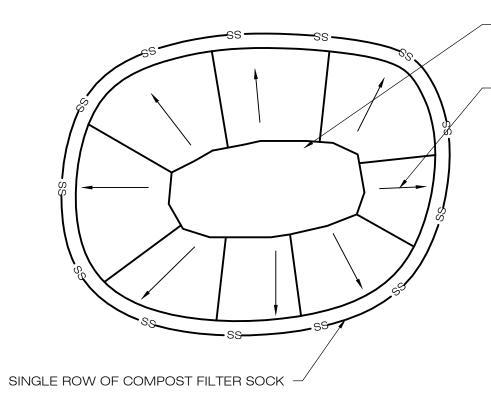
1 SILT FENCE DETAIL



CONSTRUCTION

2 ENTRANCE DETAIL

EC-2 SCALE: N.T.S.



- SOIL/AGGREGATE STOCKPILE OF EXISTING SITE MATERIAL TO BE REUSED AND/OR NEW MATERIAL TO BE INSTALLED IN THE WORK

DIRECTION OF RUN-OFF FLOW (TYP.)

NOTES:

1. ALL EXISTING EXCAVATED

MATERIAL THAT IS NOT TO BE

REUSED IN THE WORK IS TO BE

IMMEDIATELY REMOVED FROM THE

SITE AND PROPERLY DISPOSED OF.

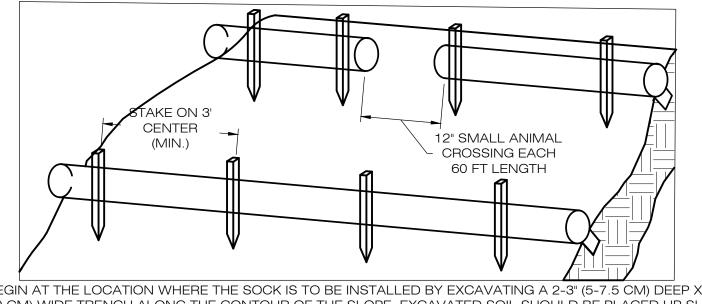
2. SOIL/AGGREGATE STOCKPILE
SITES TO BE WHERE SHOWN ON
THE DRAWINGS.

3. RESTORE STOCKPILE SITES TO PRE-EXISTING PROJECT CONDITION AND RESEED AS REQUIRED.

4. STOCKPILE HEIGHTS MUST NOT EXCEED 35'. STOCKPILE SLOPES MUST BE 2:1 OR FLATTER.

3 MATERIALS STOCKPILE DETAIL

SCALE: N.T.S.



1. BEGIN AT THE LOCATION WHERE THE SOCK IS TO BE INSTALLED BY EXCAVATING A 2-3" (5-7.5 CM) DEEP X 9" (22.9 CM) WIDE TRENCH ALONG THE CONTOUR OF THE SLOPE. EXCAVATED SOIL SHOULD BE PLACED UP SLOPE FROM THE ANCHOR TRENCH.

2. PLACE THE SOCK IN THE TRENCH SO THAT IT CONTOURS TO THE SOIL SURFACE. COMPACT SOIL FROM THE EXCAVATED TRENCH AGAINST THE SOCK ON THE UPHILL SIDE. SOCKS SHALL BE INSTALLED IN 60 FT CONTINUOUS LENGTHS WITH ADJACENT SOCKS TIGHTLY ABUT. EVERY 60 FT THE SOCK ROW SHALL BE SPACED 12 INCHES CLEAR, END TO END, FOR AMPHIBIAN AND REPTILE TRAVEL. THE OPEN SPACES SHALL BE STAGGERED MID LENGTH OF THE NEXT DOWN GRADIENT SOCK.

3. SECURE THE SOCK WITH 18-24" (45.7-61 CM) STAKES EVERY 3-4' (0.9 -1.2 M) AND WITH A STAKE ON EACH END. STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE SOCK LEAVING AT LEAST 2-3" (5-7.5 CM) OF STAKE EXTENDING ABOVE THE SOCK. STAKES SHOULD BE DRIVEN PERPENDICULAR TO THE SLOPE FACE.

COMPOST FILTER SOCK
SEDIMENTATION CONTROL BARRIER

SCALE: N.T.S.

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CSC PERMIT SET		
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0	09/28/22	FOR REVIEW: RCB
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#### DESIGN PROFESSIONAL OF RECORD

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ADD: 567 VAUXHALL STREET
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NEW BRITAIN LANDFILL SOLAR

SITE DEMING ROAD ADDRESS: BERLIN, CT

APT FILING NUMBER: CT481610

DRAWN BY: JT

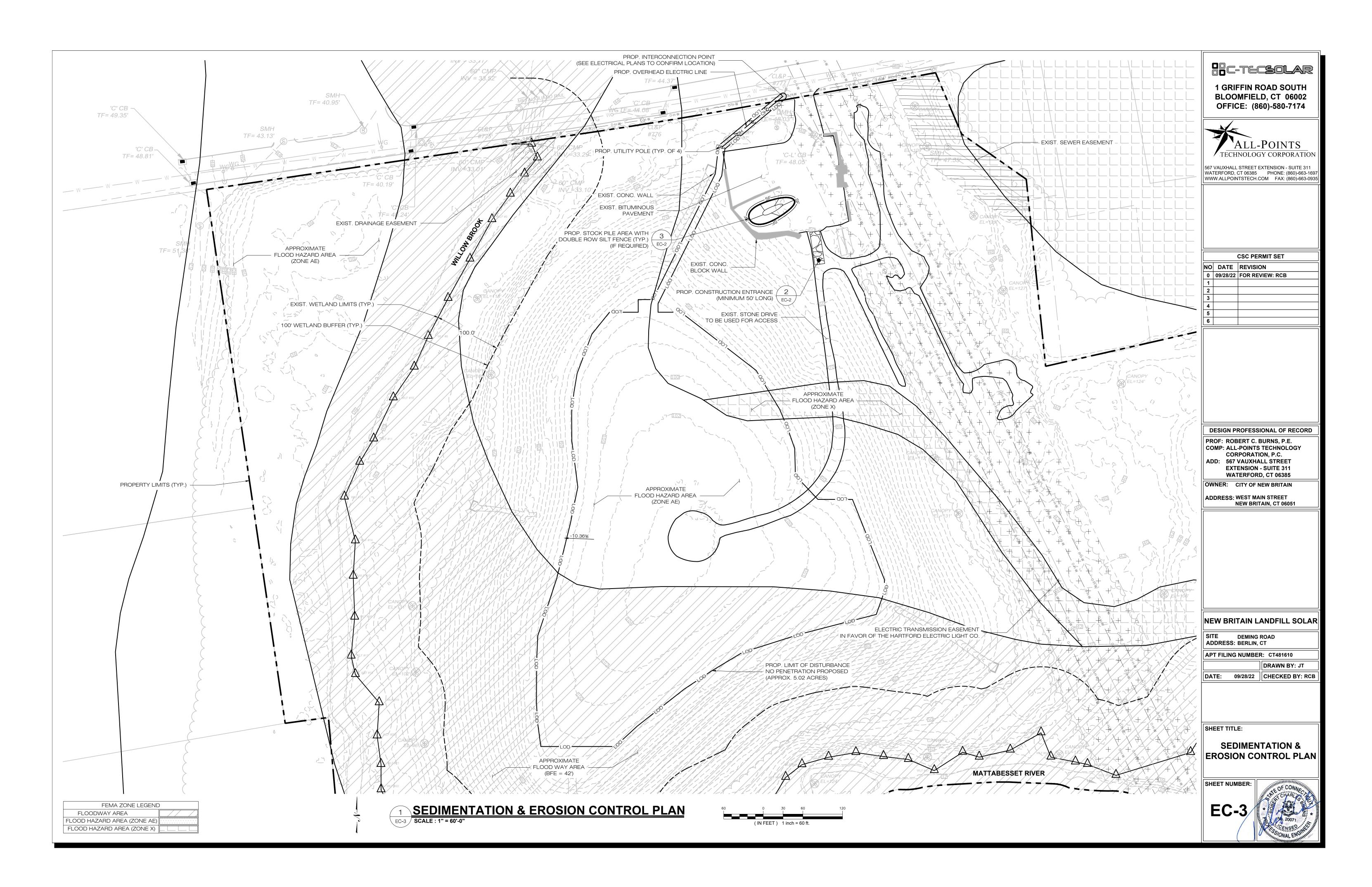
DATE: 09/28/22 CHECKED BY: RCB

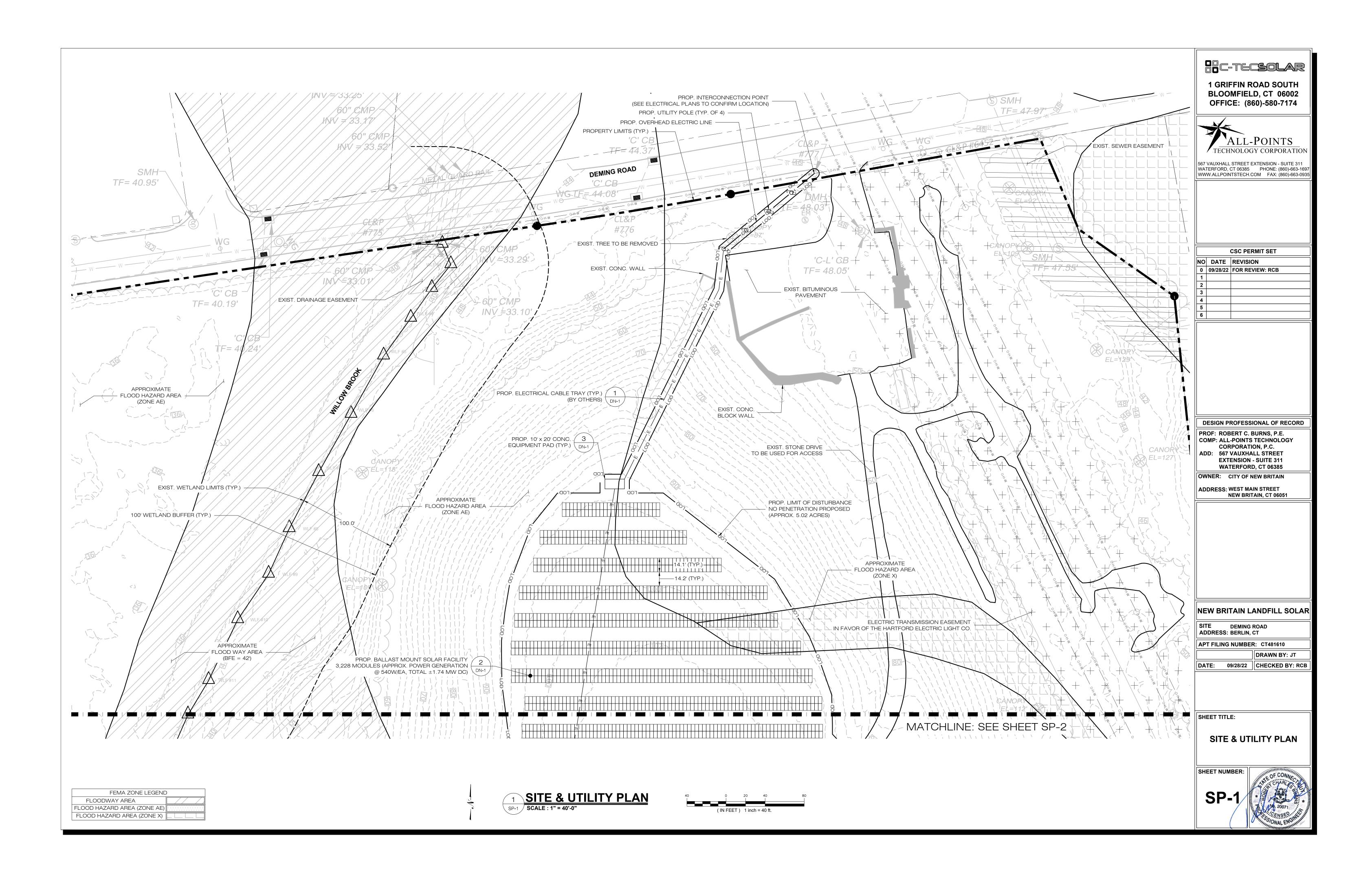
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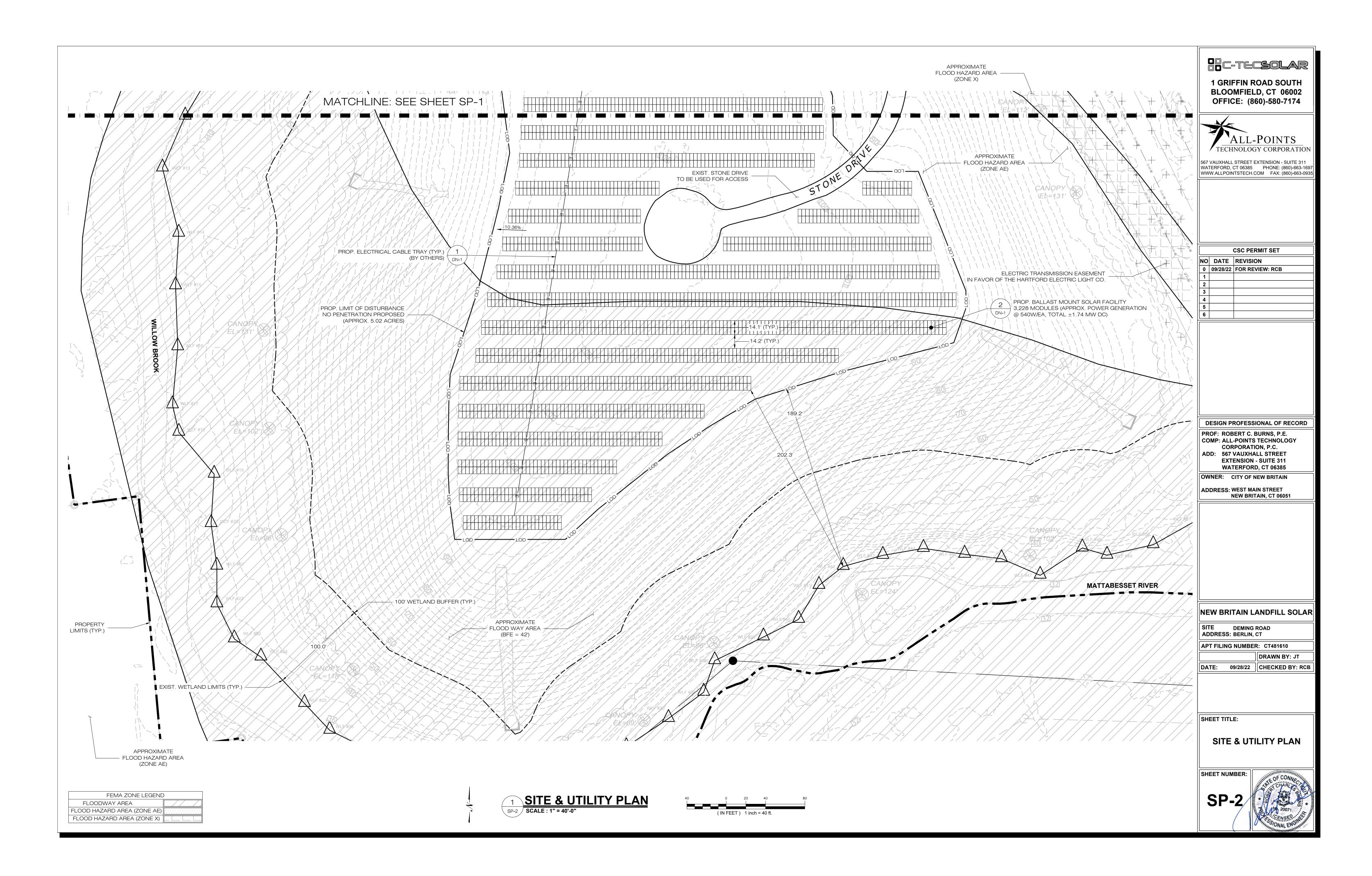
SEDIMENTATION & EROSION CONTROL DETAILS

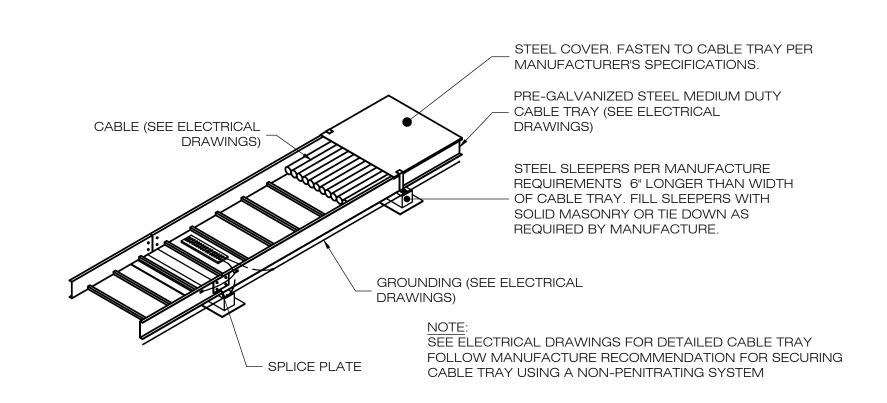
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C-2

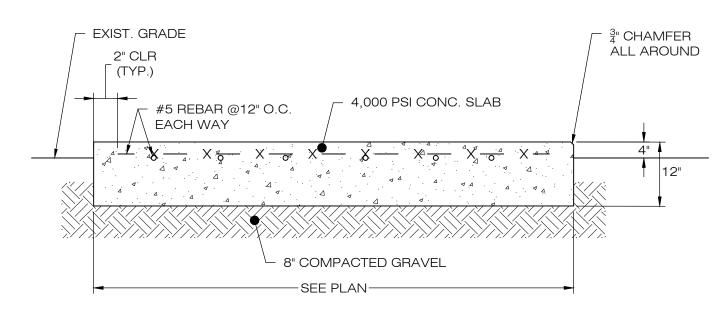




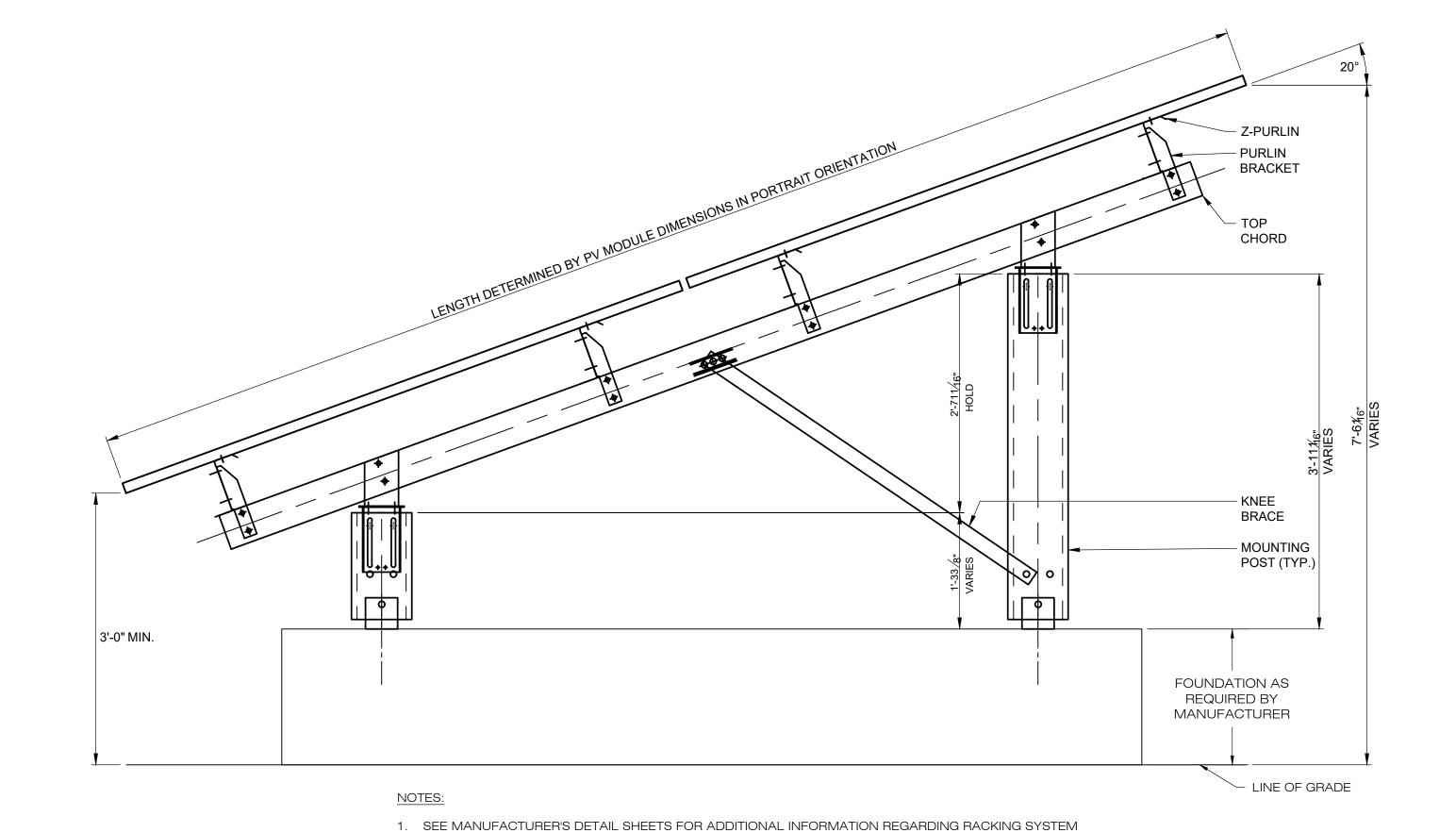




## 1 GROUND MOUNTED CABLE TRAY SCALE: N.T.S.



3 CONCRETE EQUIPMENT PAD SCALE: N.T.S.



2 TYPICAL POST MOUNTED RACKING SYSTEM SCALE: N.T.S.

REQUIREMENTS AND INSTALLATION PROCEDURES. RACKING SYSTEM TO BE INSTALLED IN ACCORDANCE

2. FOUNDATION & STONE BASE SHALL BE AS REQUIRED BY GEOTECHNICAL ENGINEER & RACKING

WITH MANUFACTURER'S REQUIREMENTS.

MANUFACTURER.

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DRAWN BY: JT

DATE: 09/28/22 CHECKED BY: RCB

SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

N-1

## **APPENDIX B**

## USFWS AND NDDB COMPLIANCE STATEMENT



79 Elm Street • Hartford, CT 06106-5127

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Affirmative Action/Equal Opportunity Employer

October 13, 2022

Dean Gustafson All-Points Technology Corporation, P.C. 567 Vauxhall Street Ext., Suite 311 Waterford, CT 06385-4341 dgustafson@allpointstech.com

Project: Installation of commercial-scale photovoltaic solar facility on landfill property; New Britain Landfill

Solar, 142 Deming Road, Berlin, CT NDDB Determination No.: 202210240

Dear Dean Gustafson,

I have reviewed Natural Diversity Database (NDDB) maps and files regarding the area of work provided for the proposed installation of commercial-scale photovoltaic solar facility on landfill property, New Britain Landfill Solar, 142 Deming Rd., Berlin, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. Contact NDDB to report the presence of any listed species and for more detailed guidance. This determination is good for two years. Please re-submit a new NDDB Request for Review if the scope of work changes or if work has not begun on this project by October 13, 2024.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Natural History Survey, cooperating units of DEEP, landowners, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substitutes for on-site surveys necessary for a thorough environmental impact assessment. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the database as it becomes available.

Please contact me if you have further questions at (860) 424-3378, or <u>karen.zyko@ct.gov</u>. Thank you for consulting the Natural Diversity Database.

Sincerely,

Karen Zyko

Kaun Zh

**Environmental Analyst** 



### United States Department of the Interior

# U.S. FISH & WILDLIFE SERVICE

#### FISH AND WILDLIFE SERVICE

New England Ecological Services Field Office 70 Commercial Street, Suite 300 Concord, NH 03301-5094 Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To: July 26, 2022

Project code: 2022-0067639

Project Name: C-TEC New Britain Landfill

Subject: Consistency letter for the 'C-TEC New Britain Landfill' project indicating that any

take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR

§17.40(o).

#### Dear Deborah Gustafson:

The U.S. Fish and Wildlife Service (Service) received on July 26, 2022 your effects determination for the 'C-TEC New Britain Landfill' (the Action) using the northern long-eared bat (*Myotis septentrionalis*) key within the Information for Planning and Consultation (IPaC) system. You indicated that no Federal agencies are involved in funding or authorizing this Action. This IPaC key assists users in determining whether a non-Federal action may cause "take" of the northern long-eared bat that is prohibited under the Endangered Species Act of 1973 (ESA) (87 Stat.884, as amended; 16 U.S.C. 1531 et seq.).

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o). Unless the Service advises you within 30 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that the Action is not likely to result in unauthorized take of the northern long-eared bat.

Please report to our office any changes to the information about the Action that you entered into IPaC, the results of any bat surveys conducted in the Action area, and any dead, injured, or sick northern long-eared bats that are found during Action implementation.

If your Action proceeds as described and no additional information about the Action's effects on species protected under the ESA becomes available, no further coordination with the Service is required with respect to the northern long-eared bat.

The IPaC-assisted determination for the northern long-eared bat **does not** apply to the following ESA-protected species that also may occur in your Action area:

• Monarch Butterfly *Danaus plexippus* Candidate

You may	coordinate w	ith our (	Office to	determine	whether	the Action	may cau	ıse prohibi	ted take
of the anii	mal species l	isted ab	ove.						

[1] Take means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct [ESA Section 3(19)].

#### **Action Description**

You provided to IPaC the following name and description for the subject Action.

#### 1. Name

C-TEC New Britain Landfill

#### 2. Description

The following description was provided for the project 'C-TEC New Britain Landfill':

C-TEC intends to lease a portion of the  $\pm 43.3$ -acre Property for development of a  $\pm 1.3$  (AC) megawatt solar photovoltaic electric generating facility located at Deming Road, Berlin, Connecticut.

Approximate location of the project can be viewed in Google Maps: <a href="https://www.google.com/maps/@41.63777565">https://www.google.com/maps/@41.63777565</a>,-72.74426308540552,14z



#### **Determination Key Result**

This non-Federal Action may affect the northern long-eared bat; however, any take of this species that may occur incidental to this Action is not prohibited under the final 4(d) rule at 50 CFR §17.40(o).

#### Determination Key Description: Northern Long-eared Bat 4(d) Rule

This key was last updated in IPaC on **May 15, 2017**. Keys are subject to periodic revision.

This key is intended for actions that may affect the threatened northern long-eared bat.

The purpose of the key for non-Federal actions is to assist determinations as to whether proposed actions are excepted from take prohibitions under the northern long-eared bat 4(d) rule.

If a non-Federal action may cause prohibited take of northern long-eared bats or other ESA-listed animal species, we recommend that you coordinate with the Service.

## **Determination Key Result**

Based upon your IPaC submission, any take of the northern long-eared bat that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR §17.40(o).

#### **Qualification Interview**

- 1. Is the action authorized, funded, or being carried out by a Federal agency? *No*
- 2. Will your activity purposefully **Take** northern long-eared bats? *No*
- 3. [Semantic] Is the project action area located wholly outside the White-nose Syndrome Zone?

#### Automatically answered

No

4. Have you contacted the appropriate agency to determine if your project is near a known hibernaculum or maternity roost tree?

Location information for northern long-eared bat hibernacula is generally kept in state Natural Heritage Inventory databases — the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases and other sources of information on the locations of northern long-eared bat roost trees and hibernacula is available at <a href="https://www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.">www.fws.gov/media/nleb-roost-tree-and-hibernacula-state-specific-data-links-0.</a>

Yes

5. Will the action affect a cave or mine where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

No

6. Will the action involve Tree Removal?

No

#### **Project Questionnaire**

If the project includes forest conversion, report the appropriate acreages below. Otherwise, type '0' in questions 1-3.

1. Estimated total acres of forest conversion:

0

2. If known, estimated acres of forest conversion from April 1 to October 31

0

3. If known, estimated acres of forest conversion from June 1 to July 31  $\,$ 

0

## If the project includes timber harvest, report the appropriate acreages below. Otherwise, type '0' in questions 4-6.

4. Estimated total acres of timber harvest

0

5. If known, estimated acres of timber harvest from April 1 to October 31

0

6. If known, estimated acres of timber harvest from June 1 to July 31

0

## If the project includes prescribed fire, report the appropriate acreages below. Otherwise, type '0' in questions 7-9.

7. Estimated total acres of prescribed fire

0

8. If known, estimated acres of prescribed fire from April 1 to October 31

0

9. If known, estimated acres of prescribed fire from June 1 to July 31  $\,$ 

0

## If the project includes new wind turbines, report the megawatts of wind capacity below. Otherwise, type '0' in question 10.

10. What is the estimated wind capacity (in megawatts) of the new turbine(s)?

0

07/26/2022 Exhibit A 6

#### **IPaC User Contact Information**

Agency: All-Points Technology Corporation, P.C.

Name: Deborah Gustafson

Address: 567 Vauxhall Street Extension

Address Line 2: Suite 311 City: Waterford

State: CT Zip: 06235

Email dleonardo@allpointstech.com

Phone: 8609849514

## **APPENDIX C**

## **CULTURAL RESOURCES REVIEW**





October 28, 2022

Mr. David George
Heritage Consultants LLC
830 Berlin Turnpike
Berlin, CT 06057
(sent only via email to dgeorge@heritage-consultants.com)

Subject: Phase IA Cultural Resources Survey of a Proposed Solar Development

Deming Road Berlin, Connecticut

Dear Mr. George:

The State Historic Preservation Office (SHPO) received the letter report prepared by Heritage Consultants (Heritage) titled *Preliminary Archaeological Assessment of a Proposed Solar Facility Located on Deming Road in Berlin, Connecticut* dated September 6, 2022. The proposed project consists of the construction of a new solar facility with associated infrastructure that includes stormwater management structures. Because the project will require a Stormwater Discharge permit issued by Department of Energy and Environmental Protection (DEEP) through the authority of the Environmental Protection Agency, it is subject to review by this office pursuant to Section 106 of the National Historic Preservation Act. Based on the information submitted to our office, the completed investigation meets the standards set forth in the *Environmental Review Primer for Connecticut's Archaeological Resources*.

The archaeological assessment survey consisted of comprehensive background research that examined historic maps and aerial imagery as well as previously identified cultural resources within one mile of the proposed project area. No previously recorded archaeological sites were identified during the assessment survey. However, Heritage identified three historic cemeteries, five properties listed on the State Register of Historic Places, and one property listed on the National Register of Historic Places (Worthington Bridge Historic District). SHPO concurs with Heritage that the proposed project will not impact previously identified cultural resources. The Phase IA assessment survey revealed that the entirety of the proposed project area is situated within the bounds of a former landfill location. Therefore, Heritage concluded that the project area associated with the proposed solar development has a no/low potential to yield intact archaeological deposits. Based on the information provided to our office, SHPO concurs with the findings of the letter report that no additional archeological investigations are warranted and that no historic properties will be affected by the proposed solar project.

This office appreciates the opportunity to review and comment upon this project. For additional information, please contact Cory Atkinson, Staff Archaeologist and Environmental Reviewer, at (860) 500-2458 or cory.atkinson@ct.gov.

Sincerely,

Jonathan Kinney

State Historic Preservation Officer

mathan haves

## **APPENDIX D**

## PRODUCT INFORMATION SHEETS



## 100/125kW, 1500Vdc String Inverters for North America



The 100 & 125kW high power CPS three-phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch safe fusing for up to 20 strings. The CPS FlexOM Gateway enables communication, controls and remote product upgrades.

#### **Key Features**

- NFPA 70 and NEC compliant
- Touch safe DC Fuse holders adds convenience and safety
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated AC & DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper and Aluminum compatible AC connections

- NEMA Type 4X outdoor rated enclosure
- Advanced Smart-Grid features (CA Rule 21 certified)
- kVA headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.87 (100kW) and 1.5 (125kW) DC/AC inverter load ratios
- Separable wire-box design for fast service
- Standard 5-year warranty with extensions to 20 years



100/125KTL Standard Wire-box



100/125KTL Centralized Wire-box







Model Name	CPS SCH100KTL-DO/US-600 CPS SCH125KTL-DO/US-600			
CInput				
Max. PV power	187.5kW			
Max. DC input voltage	1500V			
Operating DC input voltage range	860-1450Vdc			
Start-up DC input voltage / power	900V / 250W			
Number of MPP trackers	1			
MPPT voltage range <sup>1</sup>	870-1300Vdc			
5 5	275A			
Max. PV input current (Isc x 1.25)				
Number of DC inputs	20 PV source circuits, pos. & neg. fused with Standard Wire-box			
tumber of Be inputs	1 input circuit, 1-2 terminations per pole, non-fused with Centralized Wire-box			
OC disconnection type	Load-rated DC switch			
OC surge protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)			
AC Output	Type I more (manufactor) considering graph of 215 m/m. 2018 (0/2008)			
Rated AC output power	100kW 125kW			
Max. AC output power <sup>2</sup>	100kVA (111kVA @ PF>0.9) 125kVA (132kVA @ PF>0.95)			
Rated output voltage	600Vac			
Output voltage range <sup>3</sup>	528-660Vac			
Grid connection type <sup>4</sup>	3Φ / PE / N (neutral optional)			
Max. AC output current @ 600Vac	96.2 / 106.8A 120.3 / 127.0A			
Rated output frequency	60Hz			
Output frequency range <sup>3</sup>	57-63Hz			
Power factor	>0.99 (±0.8 adjustable) >0.99 (±0.8 adjustable)			
Current THD				
	<3%			
Max. fault current contribution (1-cycle RMS)	41.47A			
Max. OCPD rating	200A			
AC disconnection type	Load-rated AC switch			
AC surge protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)			
System				
Topology	Transformerless			
Max. efficiency	99.1%			
•				
CEC efficiency	98.5%			
Stand-by / night consumption	<4W			
Environment				
Enclosure protection degree	NEMA Type 4X			
Cooling method	Variable speed cooling fans			
Operating temperature range	$-22^{\circ}$ F to $+140^{\circ}$ F / $-30^{\circ}$ C to $+60^{\circ}$ C (derating from $+108^{\circ}$ F / $+42^{\circ}$ C)			
Non-operating temperature range <sup>5</sup>	-40°F to +158°F / -40°C to +70°C maximum			
Operating humidity	0-100%			
Operating altitude	8202ft / 2500m (no derating)			
Audible noise	<65dBA@1m and 25°C			
Display and Communication				
User interface and display	LED indicators, WiFi + APP			
nverter monitoring	Modbus RS485			
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)			
Modbus data mapping	SunSpec / CPS			
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)			
Mechanical	Juliulu / (With Hexolal Cateway)			
viechanical	45.20 - 24.25 - 0.04 - /4450 - 04.0 - 250 2 - 24.5 - 1 - 14.5 - 1			
Dimensions (W x H x D)	45.28 x 24.25 x 9.84in (1150 x 616 x 250mm) with Standard Wire-box			
-,	39.37 x 24.25 x 9.84in (1000 x 616 x 250mm) with Centralized Wire-box			
A/-:	Inverter: 121lbs (55kg); Wire-box: 55lbs (25kg) with Standard Wire-box			
Weight	33lbs (15kg) with Centralized Wire-box			
Mounting / installation angle	15 - 90 degrees from horizontal (vertical or angled)			
viounting / installation angle				
AC termination	M10 stud type terminal [3Φ] (wire range:1/0AWG - 500kcmil CU/AL, lugs not supplied)			
	Screw clamp terminal block [N] (#12 - 1/0AWG CU/AL)			
	Screw clamp fuse holder (wire range: #12 - #6AWG CU) with Standard Wire-box			
OC termination	Busbar, M10 bolts (wire range: #1AWG - 500kcmil CU/AL [1 termination per pole],			
	#1AWG - 300kcmil CU/AL [2 terminations per pole], lugs not supplied) with Centralized Wire-b			
Tues of string inputs				
used string inputs	20A fuses provided (fuse values up to 30A acceptable)			
Safety				
Certifications and standards	UL 1741-SA/SB Ed. 3, CSA-C22.2 NO.107.1-01, IEEE 1547-2018, FCC PART15			
Selectable grid standard	IEEE 1547a-2014, IEEE 1547-2018 <sup>7</sup> , CA Rule 21, ISO-NE			
Smart-grid features	Volt-RideThru, Freq-RideThru, Ramp-Rate, Specified-PF, Volt-VAR, Freq-Watt, Volt-Watt			
Warranty				
Standard <sup>6</sup>	5 years			
	·			
Extended terms	10, 15 and 20 years			
See user manual for further information regarding MPPT voltage "Max. AC apparent power" rating valid within MPPT voltage range a	range when operating at non-unity PF. Ind temperature range of -30°C to +40°C (-22°Fto +104°F) for 100kW PF>0.9 and 125kW PF>0.95.			
The "output voltage range" and "output frequency range" may differ	raccording to the specific grid standard.			
Wye neutral-grounded; Delta may not be corner-grounded. See user manual for further requirements regarding non-operation				

HIGH EFFICIENCY BI-FACIAL GLASS-GLASS PV MODULES

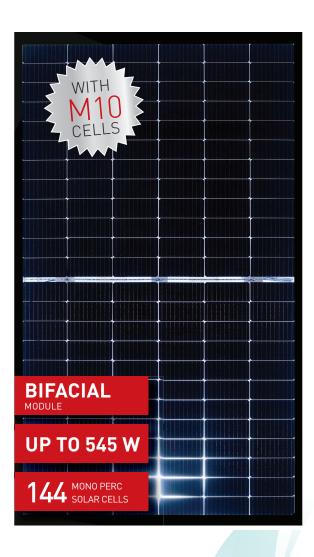
525-545W

POSITIVE POWER TOLERANCE WP

21.13

 $0 \sim +4.99$ 

CELLS M10 144 MODULE TECHNOLOGY **HALF CUT & MICRO** 





**RELIABILITY IS IMPROVED** with minimum exposure to corrosion from sand & salt mist with low risk of module warping & micro cracking



Bifacial gain of **UP TO 25%** with dual glass module, capable of energy generation with both direct and reflected sunlight



Additional Power yield with 30 YEARS OF PERFORMANCE LIFE with 0.5% annual power degradation



LCOE IS CUT BACK with LESS BOS COST which improves value proposition of the product with competitive **ROI** 



TWO PEAK PERFORMANCE TIME, during sun rise and sun set with optimum utilization of dual facial generation



Hassle-free installation with ability to INSTALL VERTICALLY IN EAST WEST DIRECTION, with improved soiling resistant



Implementation of bypass diodes in split JB seriesparallel connections enable the module to perform in **PARTIAL SHADOW CONDITIONS** with respect to full-cell module



LOWER INTERNAL RESISTANCE boosts module power helping to achieve minimal power loss with respect to previous variant modules















#### **APPLICATIONS**

- On-grid large scale utility systems
- On-grid rooftop industrial and commercial systems
- Rooftop residential systems





## TECHNICAL DATA

PARADEA 525-545W-BLACK

#### THIS DATASHEET IS APPLICABLE FOR: PARADEA VSMDH.72.AAA.05 (AAA=525-545)

#### Electrical Data<sup>1,2</sup> All data refers to STC (AM 1.5, 1000 W/m², 25°C)

Peak Power P <sub>max</sub> (Wp)	525	530	535	540	545
Maximum Voltage V <sub>mpp</sub> (V)	41.4	41.5	41.6	41.7	41.8
Maximum Current I <sub>mpp</sub> (A)	12.69	12.78	12.87	12.95	13.04
Open Circuit Voltage V <sub>oc</sub> (V)	49.2	49.3	49.4	49.5	49.6
Short Circuit Current I <sub>sc</sub> (A)	13.4	13.48	13.56	13.64	13.73
Module Efficiency η(%)	20.36	20.55	20.75	20.94	21.13

1) STC:1000 W/m² irradiance, 25°C cell temperature, AM1.5g spectrum according to EN 60904-3. | 2) Power measurement uncertainty is within +/- 2%.

#### Electrical Parameters at NOCT<sup>3</sup>

Power (W)	391.4	393	397	399	402
V@P <sub>max</sub> (V)	38.2	38.3	38.4	38.5	38.6
I@P <sub>max</sub> (A)	10.25	10.29	10.34	10.37	10.43
V <sub>oc</sub> (V)	45.8	45.9	46	46.1	46.2
I <sub>sc</sub> (A)	10.83	10.89	10.96	11.03	11.09

3) NOCT irradiance 800 W/m², ambient temperature 20°C, wind speed 1 m/sec

#### **Equivalent Bifacial Output**

Bifacial Gain		Overall Power output (W)				
5%	551	557	562	567	572	
10%	578	583	589	594	600	
15%	604	610	615	621	627	
20%	630	636	642	648	654	
25%	656	663	669	675	681	

#### Temperature Coefficients (Tc) permissible operating conditions

Tc of Open Circuit Voltage (β)	-0.27%/°C
Tc of Short Circuit Current (α)	0.050%/°C
Tc of Power (γ)	-0.35%/°C
Maximum System Voltage	1500V
NOCT	45°C ± 2°C
Temperature Range	-40°C to + 85°C

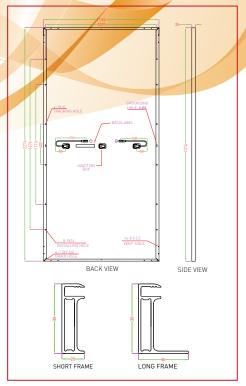
#### **Mechanical Data**

Length × Width × Height	2274 × 1134 × 35mm (89.53 × 44.65 × 1.38 inches)				
Weight	33.4 Kg (73.63 lbs)				
Junction Box	IP68, Split Junction Box with individual bypass diodes				
Cable & Connectors#	200 mm (+ve terminal) and 300 mm (-ve terminal) length cables,MC4 Compatible/MC4 Connectors				
Application Class	Class A (Safety class II)				
Superstrate""	2.0 mm (0.098 inches) high transmission low iron content, semi-tempered glass, AR coated				
Cells	72 Mono PERC (144 half-cells) P-Type Bifacial solar cells				
Substrate	2.0 mm (0.098 inches) high transmission low iron content, heat strengthened glass				
Frame	Anodized aluminium frame with twin wall profile				
Mechanical Load Test	5400 Pa (Snow load), 2400 Pa (Wind load)				
Cell Encapsulant	Polyolefin (POE)				
Maximum Series Fuse Rating	25 A				

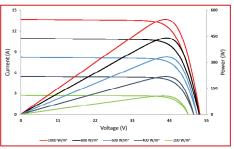
#### Warranty and Certifications

Product Warranty**	12 years		
Performance	Linear Power War	nty for 30 years with 2% for 1st year degradation and 0.5%	from year 2 to year 30
	IEC 61215 : 2016, IEC	61730 : 2016, IEC 61701, IEC 62716, IEC 60068-2-68, IS/IEC 6173 CAN-CSA	0, IS 14286, IEC 62804, CE, CEC (California),

#### Dimensions in mm

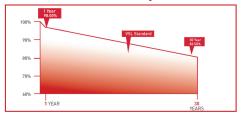


#### Typical I-V Curves4



4) Average relative efficiency reduction of 5% at 200 W/m<sup>2</sup> according to EN 60904-1

#### **Performance Warranty**



#### **Packaging Information**

Quantity /Pallet	31
Pallets/Container (40'HC)	20
Quantity/Container (40'HC)	620

<sup>^</sup>All [^] certifications under progress. | \*\* Refer to Vikram Solar's warranty document for terms and conditions. | \* 400mm|15.75 inches|, 1000mm|39.37 inches|, 1200mm |47.24 inches| cable lengths are also available | \*\* Anti-glare Glass is also available

CAUTION: READ SAFETY AND INSTALLATION MANUAL BEFORE USING THE PRODUCT.

Specifications included in this datasheet are subject to change without notice. Electrical data without guarantee. Please confirm your exact requirement with the company representative while placing your order. Vikram Solar and all its accompanying logos are trademarks of Vikram Solar Limited registered in India.





VSL/ENG/SC/285-R00



**Contact Your Sales Rep** 

Jody Cochran Phone: 864-757-2853

Email: jody@maddoxtransformer.com

Quote To:

CTEC Solar LLC

1 Griffin Road South, Suite 200 Bloomfield, CT 06002 United States

Pay Terms: Net 30

Ship To:

1 Griffin Road South, Suite 200 Bloomfield, CT 06002 United States

#	Description	Count	Price	Amount

#### 1 3-Phase Padmount Transformer

New 1500 kVA Solar Step-up Duty Padmount Transformer

High Voltage: 13800 GY/ 7970, 95 kV BIL Low Voltage: 600 Y/ 346, 30 kV BIL Taps: 2 Above, 2 Below @ 2.5%

HV Bushings: (6) 15kV 200A Wells & Inserts (dead front loop feed)

LV Bushings: (4) 6-Hole Spades

Fluid: Mineral Oil Frequency: 60 Hz Temperature Rise: 65C Cooling Class: ONAN Conductor: Al / Al

Fusing: Bayonet w/ Iso Links Switch: 4 Pos. LBOR T-Blade Tank Material: Mild Steel

Arresters: (3) 10 kV, 8.4 kV MCOV Arresters

Features & Accessories

- -Drain & Sample Valve -Dial-Type Thermometer
- -Liquid Level Gauge
- -Pressure Vacuum Gauge
- -Schrader Valve -Pressure Relief Valve
- -Padmount Green Paint
- -UL Listed
- -Electrostatic Shield
- -Separate H0 Bushing In HV Cabinet

Shipping: Free within contiguous US, FOB plant (3-5 day service)

Warranty: 3 Years

Lead-time: Shipping starts within 18 after release

Approvals: 3 weeks (if required)

1	1	
	4	11

\$65,173.00

\$65,173.00

	Quote Lines		Additional Cost		Total Quote
Before Tax	\$65,173.00	Before Tax	\$0.00	Before Tax	\$65,173.00
Tax	\$4,138.49	Tax	\$0.00	Tax	\$4,138.49
Total	\$69,311.49	Total	\$0.00	Total	\$69,311.49

#### Notes:

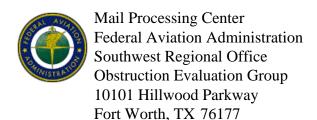
Pricing is based on the quantities above. Price to be reviewed if partial order is placed.

Price Adjustment Clause: To accommodate potential material cost adjustments, Maddox may reprice the quoted units each (3) months after the order is released. In such price change event, Buyer shall have the option to either accept the price change, or cancel any portion of the order on which the price has changed.

Prices valid for 10 days. Subject to prior sale. Payment terms offered on this quote are contingent on an established account in good standing. SALES TAXES, if applicable, may be added unless an exemption certificate is provided with purchase order. Enclosed photos may not represent finished product. Made-to-Order units are not refundable. Maddox Industrial Transformer's Standard Terms & Conditions apply, see details at: www.maddoxtransformer.com/documents

## **APPENDIX E**

## FAA DETERMINATIONS



Aeronautical Study No. 2022-ANE-6230-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 1

Location: Berlin, CT

Latitude: 41-38-20.62N NAD 83

Longitude: 72-44-42.94W

Heights: 95 feet site elevation (SE)

10 feet above ground level (AGL) 105 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6230-OE.

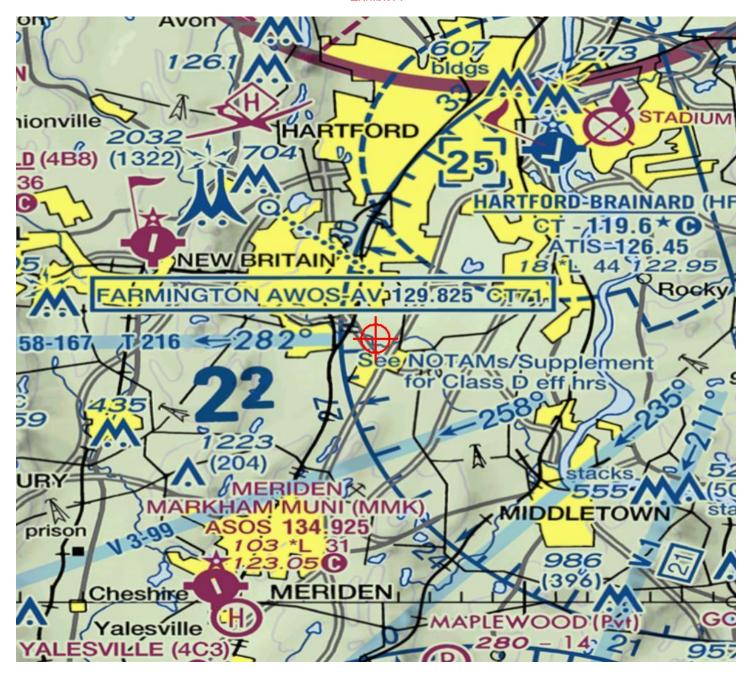
Signature Control No: 554969636-556037505 Stephanie Kimmel Specialist

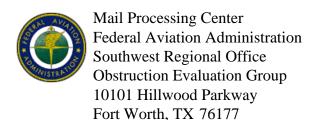
Attachment(s) Map(s)

(s)

(DNE)

## Sectional Map for ASN 2022-ANE-6230-OE Exhibit A





Aeronautical Study No. 2022-ANE-6231-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 2

Location: Berlin, CT

Latitude: 41-38-19.82N NAD 83

Longitude: 72-44-41.50W

Heights: 95 feet site elevation (SE)

10 feet above ground level (AGL) 105 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6231-OE.

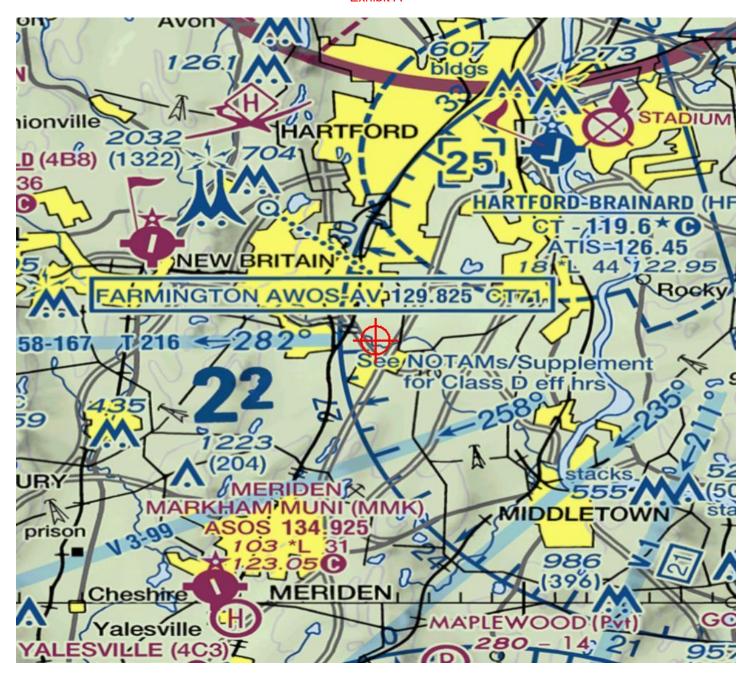
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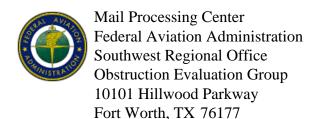
Signature Control No: 554969637-556037506 Stephanie Kimmel **Specialist** 

Map(s)

Attachment(s)

## Sectional Map for ASN 2022-ANE-6231-OE Exhibit A





Aeronautical Study No. 2022-ANE-6232-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 3

Location: Berlin, CT

Latitude: 41-38-18.71N NAD 83

Longitude: 72-44-40.74W

Heights: 98 feet site elevation (SE)

10 feet above ground level (AGL) 108 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

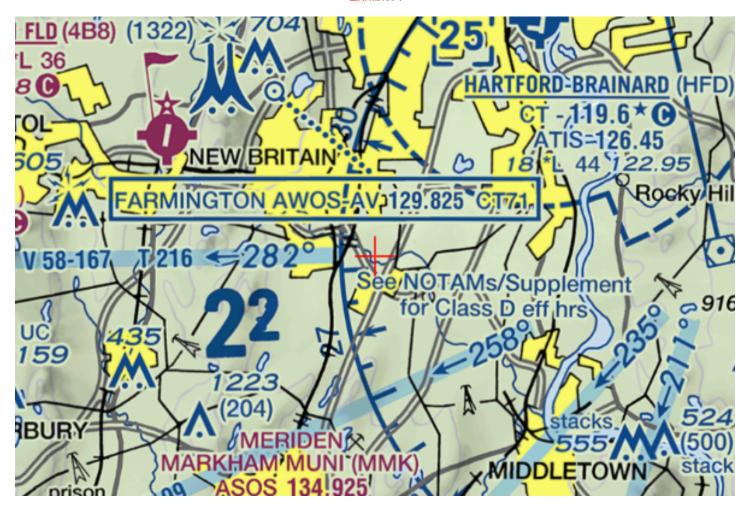
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6232-OE.

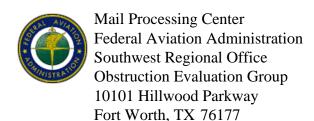
(DNE)

Signature Control No: 554969638-556037510 Stephanie Kimmel Specialist

Attachment(s) Map(s)

## Sectional Map for ASN 2022-ANE-6232-OE Exhibit A





Aeronautical Study No. 2022-ANE-6233-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 4

Location: Berlin, CT

Latitude: 41-38-17.84N NAD 83

Longitude: 72-44-39.55W

Heights: 93 feet site elevation (SE)

10 feet above ground level (AGL) 103 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6233-OE.

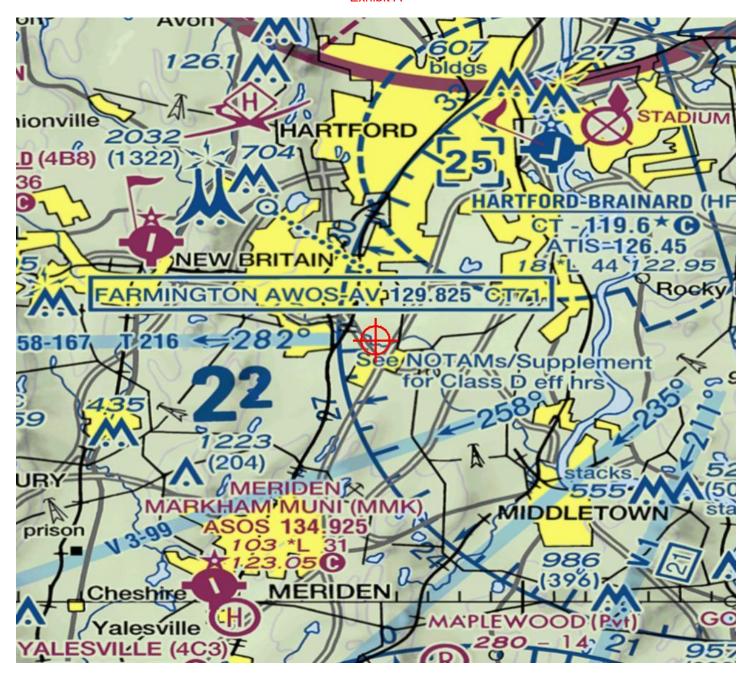
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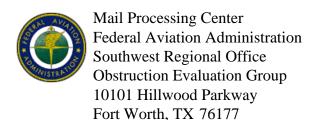
Signature Control No: 554969639-556037514 Stephanie Kimmel

Specialist

Attachment(s) Map(s)

## Sectional Map for ASN 2022-ANE-6233-OE Exhibit A





Aeronautical Study No. 2022-ANE-6234-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 5

Location: Berlin, CT

Latitude: 41-38-16.66N NAD 83

Longitude: 72-44-38.98W

Heights: 93 feet site elevation (SE)

10 feet above ground level (AGL) 103 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

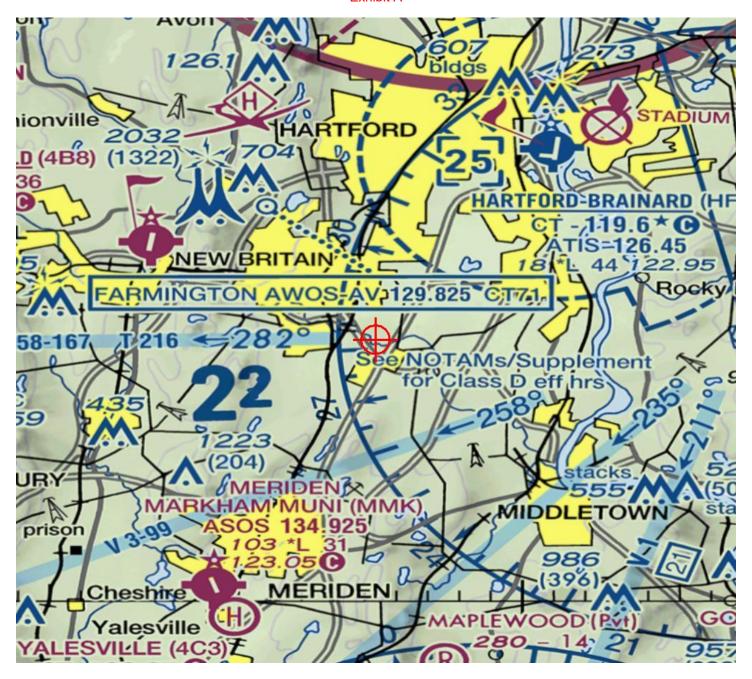
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6234-OE.

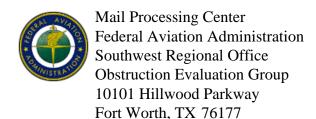
(DNE)

Signature Control No: 554969640-556037509 Stephanie Kimmel Specialist

Attachment(s) Map(s)

## Sectional Map for ASN 2022-ANE-6234-OE Exhibit A





Aeronautical Study No. 2022-ANE-6235-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 6

Location: Berlin, CT

Latitude: 41-38-16.33N NAD 83

Longitude: 72-44-39.10W

Heights: 93 feet site elevation (SE)

10 feet above ground level (AGL) 103 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO

SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

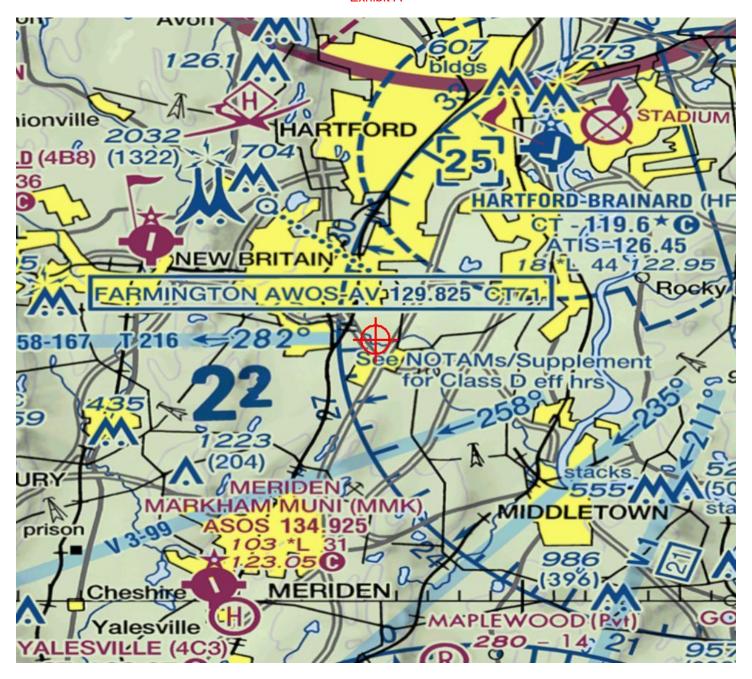
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6235-OE.

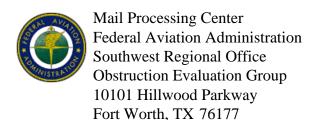
(DNE)

Signature Control No: 554969641-556037507 Stephanie Kimmel Specialist

Attachment(s) Map(s)

# Sectional Map for ASN 2022-ANE-6235-OE Exhibit A





Aeronautical Study No. 2022-ANE-6236-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 7

Location: Berlin, CT

Latitude: 41-38-15.68N NAD 83

Longitude: 72-44-41.75W

Heights: 98 feet site elevation (SE)

10 feet above ground level (AGL) 108 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6236-OE.

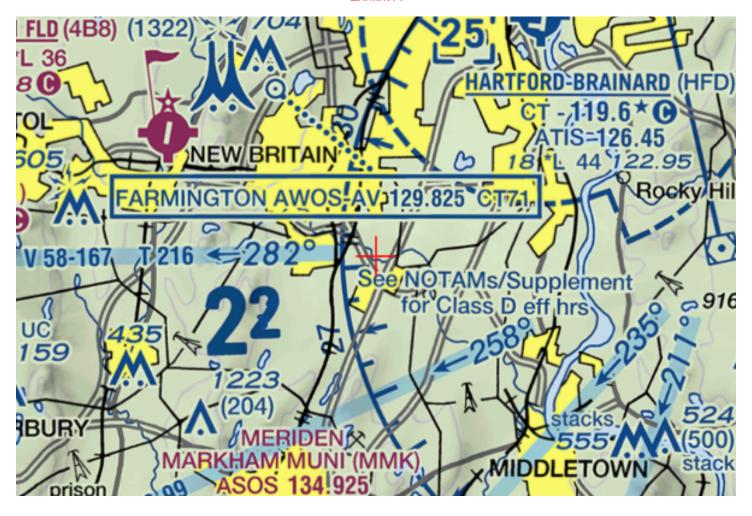
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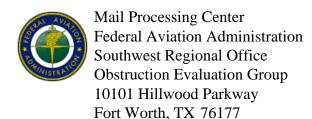
Signature Control No: 554969642-556037508 Stephanie Kimmel Specialist

Attachment(s) Map(s)

Page 2 of 3

# Sectional Map for ASN 2022-ANE-6236-OE Exhibit A





Aeronautical Study No. 2022-ANE-6237-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 8

Location: Berlin, CT

Latitude: 41-38-14.32N NAD 83

Longitude: 72-44-44.23W

Heights: 96 feet site elevation (SE)

10 feet above ground level (AGL) 106 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

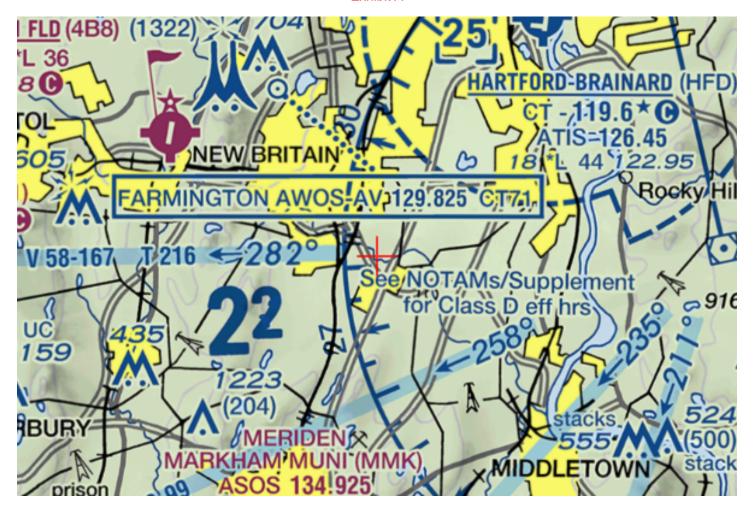
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6237-OE.

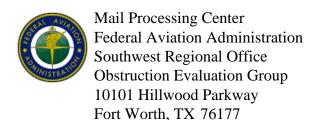
(DNE)

Signature Control No: 554969643-556037517 Stephanie Kimmel Specialist

Attachment(s) Map(s)

# Sectional Map for ASN 2022-ANE-6237-OE Exhibit A





Aeronautical Study No. 2022-ANE-6238-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 9

Location: Berlin, CT

Latitude: 41-38-14.39N NAD 83

Longitude: 72-44-45.60W

Heights: 96 feet site elevation (SE)

10 feet above ground level (AGL) 106 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

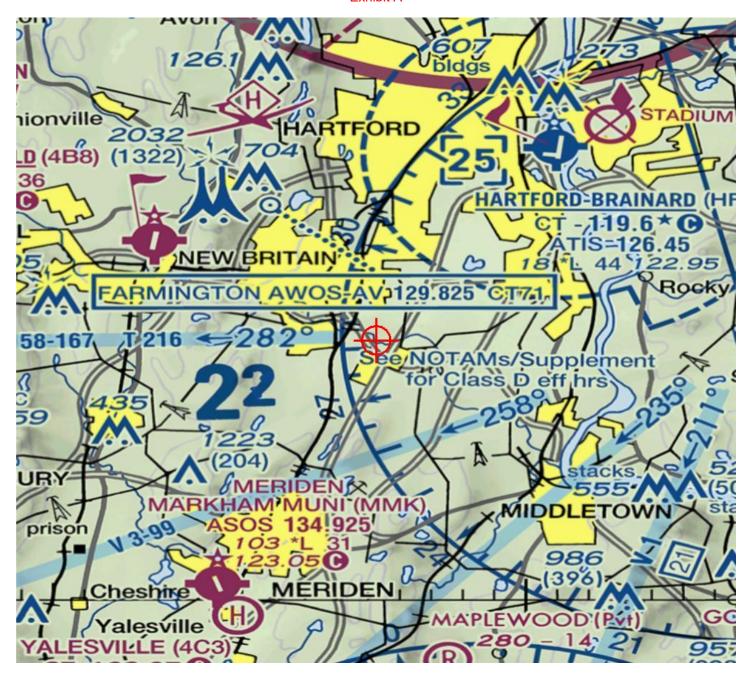
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6238-OE.

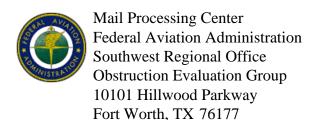
(DNE)

Signature Control No: 554969644-556037515 Stephanie Kimmel Specialist

Attachment(s) Map(s)

# Sectional Map for ASN 2022-ANE-6238-OE Exhibit A





Aeronautical Study No. 2022-ANE-6239-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 10

Location: Berlin, CT

Latitude: 41-38-15.86N NAD 83

Longitude: 72-44-45.70W

Heights: 96 feet site elevation (SE)

10 feet above ground level (AGL) 106 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

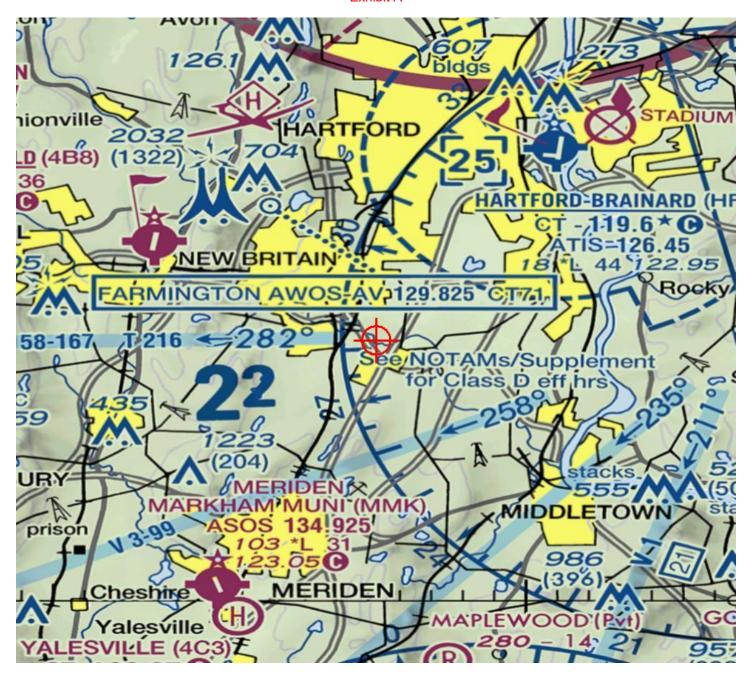
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6239-OE.

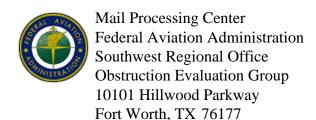
(DNE)

Signature Control No: 554969645-556037516 Stephanie Kimmel Specialist

Attachment(s) Map(s)

# Sectional Map for ASN 2022-ANE-6239-OE Exhibit A





Aeronautical Study No. 2022-ANE-6240-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 11

Location: Berlin, CT

Latitude: 41-38-18.13N NAD 83

Longitude: 72-44-44.84W

Heights: 98 feet site elevation (SE)

10 feet above ground level (AGL) 108 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

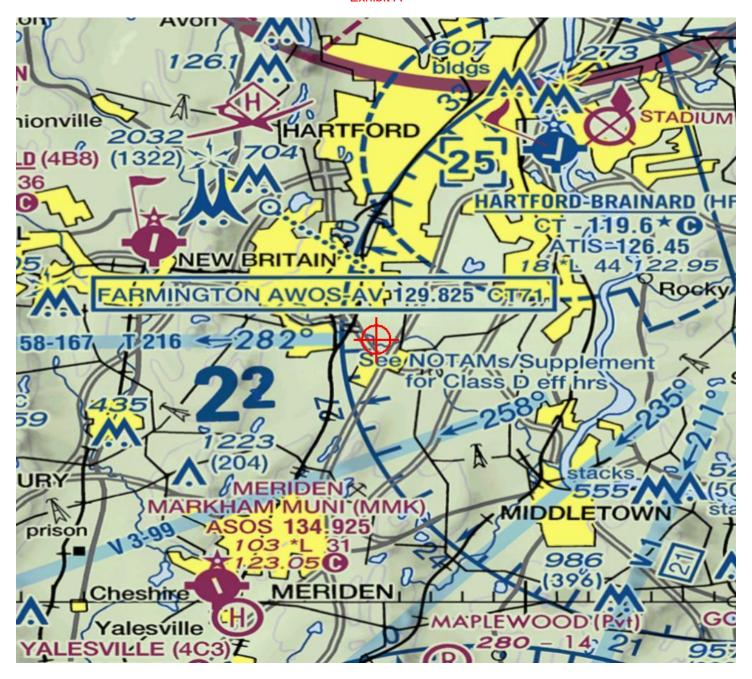
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6240-OE.

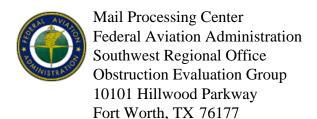
(DNE)

Signature Control No: 554969646-556037513 Stephanie Kimmel Specialist

Attachment(s) Map(s)

## Sectional Map for ASN 2022-ANE-6240-OE Exhibit A





Aeronautical Study No. 2022-ANE-6241-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 12

Location: Berlin, CT

Latitude: 41-38-19.23N NAD 83

Longitude: 72-44-44.99W

Heights: 96 feet site elevation (SE)

10 feet above ground level (AGL) 106 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

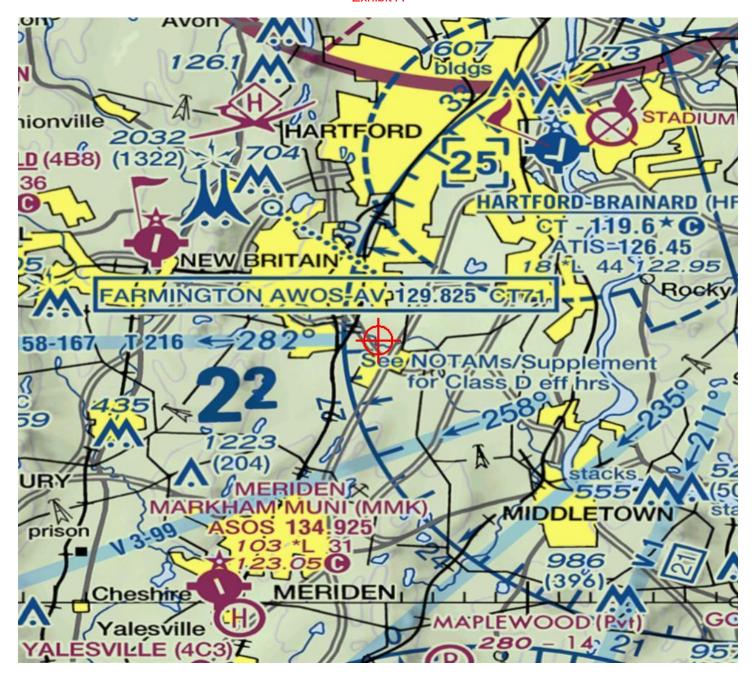
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6241-OE.

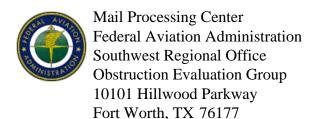
(DNE)

Signature Control No: 554969647-556037518
Stephanie Kimmel
Specialist

Attachment(s) Map(s)

## Sectional Map for ASN 2022-ANE-6241-OE Exhibit A





Aeronautical Study No. 2022-ANE-6242-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel Point 13

Location: Berlin, CT

Latitude: 41-38-20.65N NAD 83

Longitude: 72-44-44.38W

Heights: 93 feet site elevation (SE)

10 feet above ground level (AGL) 103 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

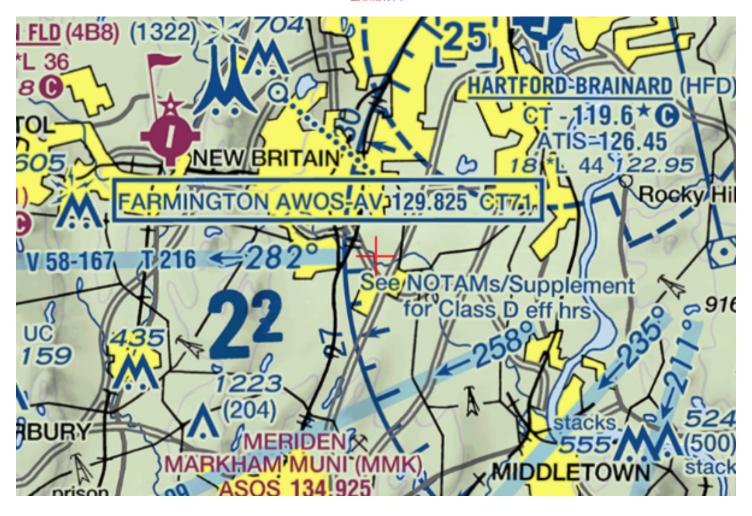
If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6242-OE.

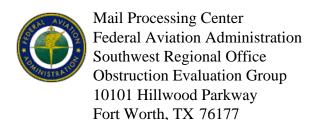
Signature Control No: 554969648-556037511 Stephanie Kimmel Specialist

Attachment(s) Map(s)

(DNE)

# Sectional Map for ASN 2022-ANE-6242-OE Exhibit A





Aeronautical Study No. 2022-ANE-6243-OE

Issued Date: 10/03/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\* DETERMINATION OF NO HAZARD TO AIR NAVIGATION \*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Solar Panel HP Location: Berlin, CT

Latitude: 41-38-17.34N NAD 83

Longitude: 72-44-42.72W

Heights: 105 feet site elevation (SE)

10 feet above ground level (AGL)115 feet above mean sea level (AMSL)

This aeronautical study revealed that the structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is(are) met:

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 04/03/2024 unless:

- (a) the construction is started (not necessarily completed) and FAA Form 7460-2, Notice of Actual Construction or Alteration, is received by this office.
- (b) extended, revised, or terminated by the issuing office.
- (c) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for completion of construction, or the date the FCC denies the application.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights, and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power, or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

If construction or alteration is dismantled or destroyed, you must submit notice to the FAA within 5 days after the construction or alteration is dismantled or destroyed.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of the structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

If we can be of further assistance, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6243-OE.

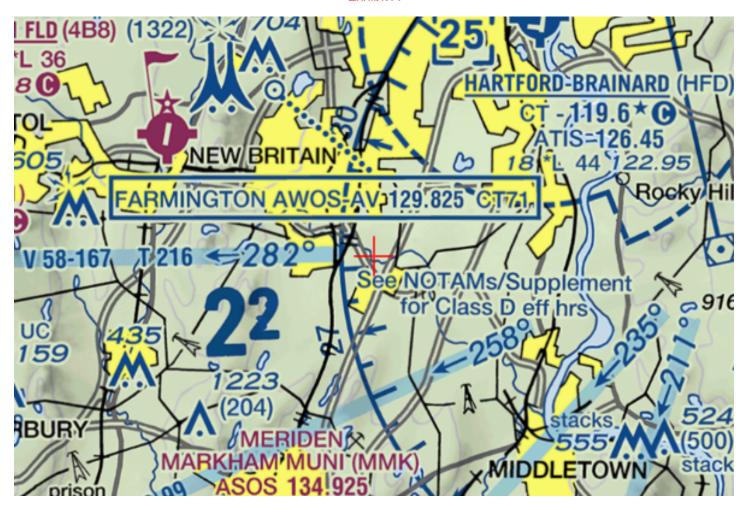
(DNE)

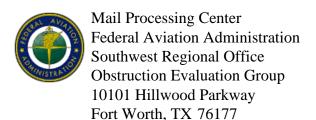
Signature Control No: 554969649-556037512
Stephanie Kimmel
Specialist

Attachment(s) Map(s)

Page 2 of 3

# Sectional Map for ASN 2022-ANE-6243-OE Exhibit A





Aeronautical Study No. 2022-ANE-6216-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 1 Location: Berlin, CT

Latitude: 41-38-20.62N NAD 83

Longitude: 72-44-42.94W

Heights: 95 feet site elevation (SE)

35 feet above ground level (AGL) 130 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6216-OE

Signature Control No: 554969189-555828465 Stephanie Kimmel Specialist (TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6216-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 130 feet above mean sea level.

**Location:** The structure will be located 6.16 nautical miles southeast of 4B8 Airport reference point.

#### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

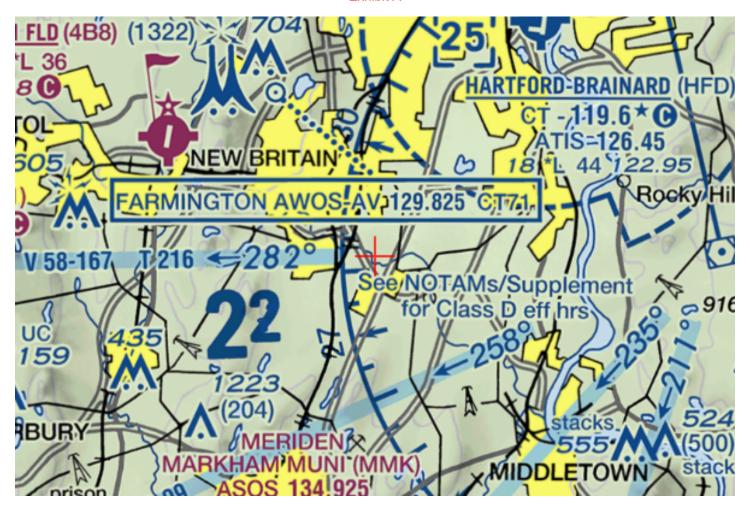
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

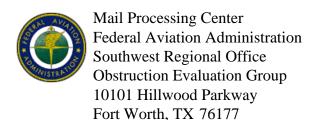
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

# Sectional Map for ASN 2022-ANE-6216-OE Exhibit A





Aeronautical Study No. 2022-ANE-6217-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 2 Location: Berlin, CT

Latitude: 41-38-19.82N NAD 83

Longitude: 72-44-41.50W

Heights: 95 feet site elevation (SE)

35 feet above ground level (AGL) 130 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6217-OE

Signature Control No: 554969190-555828461 Stephanie Kimmel Specialist (TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6217-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 130 feet above mean sea level.

**Location:** The structure will be located 6.18 nautical miles southeast of 4B8 Airport reference point.

#### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

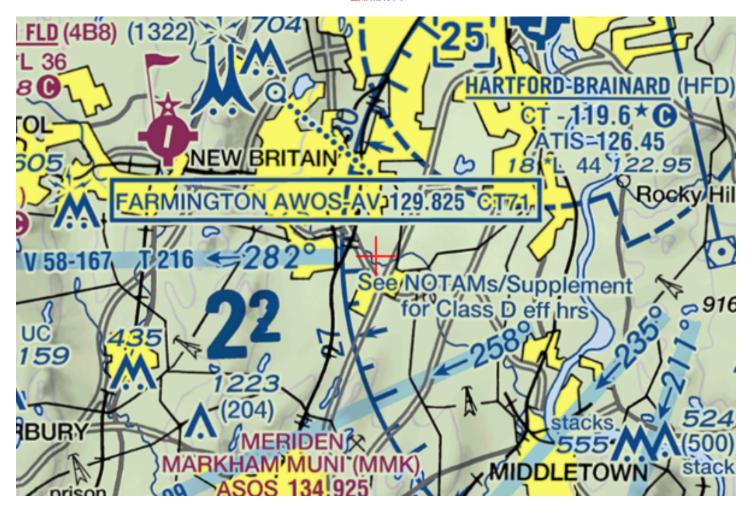
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

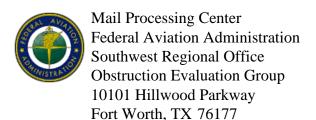
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

# Sectional Map for ASN 2022-ANE-6217-OE Exhibit A





Aeronautical Study No. 2022-ANE-6218-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 3 Location: Berlin, CT

Latitude: 41-38-18.71N NAD 83

Longitude: 72-44-40.74W

Heights: 98 feet site elevation (SE)

35 feet above ground level (AGL) 133 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6218-OE

Signature Control No: 554969191-555828459 Stephanie Kimmel (TMP)

Stephanie Kimmel Specialist

## Additional Condition(s) or Information for ASN 2022-ANE-6218-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 133 feet above mean sea level.

**Location:** The structure will be located 6.2 nautical miles southeast of 4B8 Airport reference point.

#### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

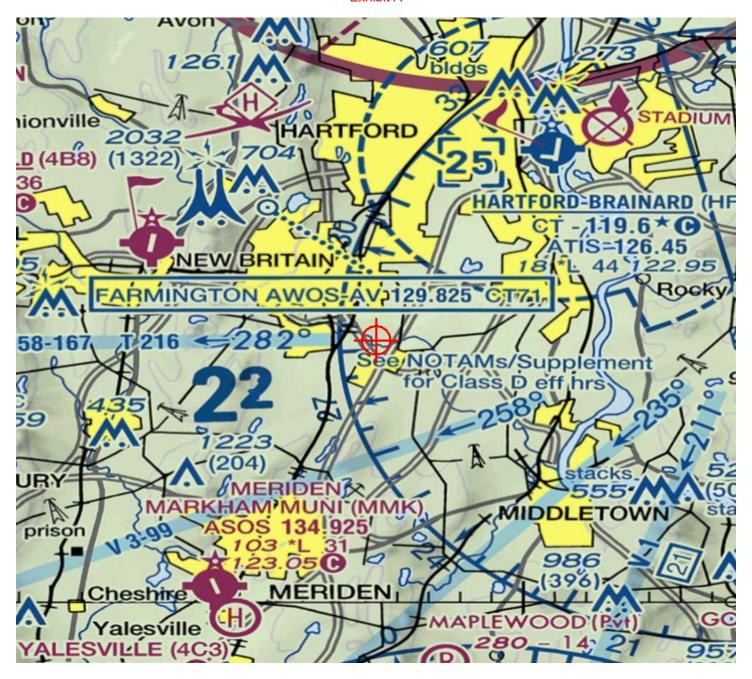
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

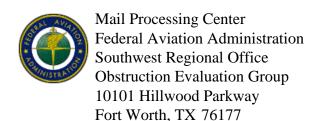
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

# Sectional Map for ASN 2022-ANE-6218-OE Exhibit A





Aeronautical Study No. 2022-ANE-6219-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 4
Location: Berlin, CT

Latitude: 41-38-17.84N NAD 83

Longitude: 72-44-39.55W

Heights: 93 feet site elevation (SE)

35 feet above ground level (AGL) 128 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6219-OE

Signature Control No: 554969192-555828455 Stephanie Kimmel Specialist (TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6219-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 128 feet above mean sea level.

**Location:** The structure will be located 6.22 nautical miles southeast of 4B8 Airport reference point.

### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

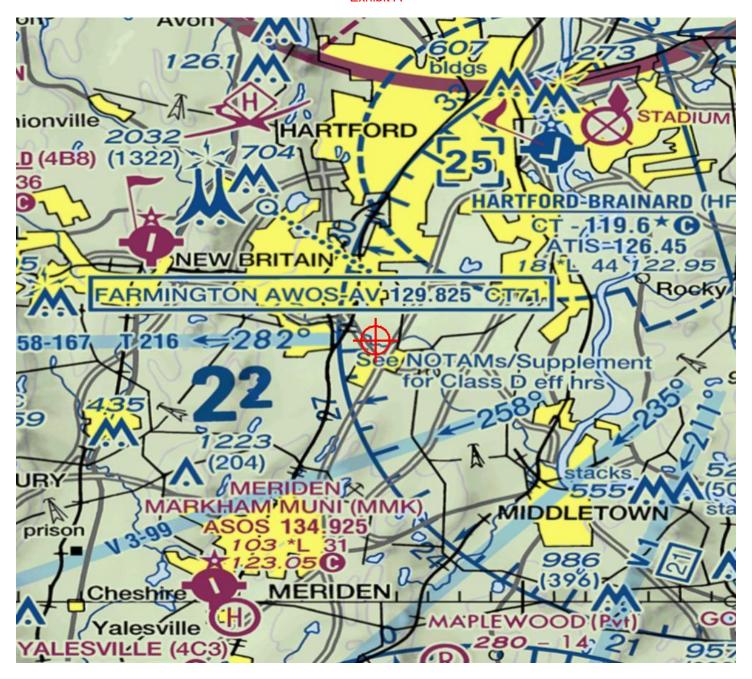
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

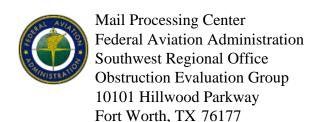
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6219-OE Exhibit A





Aeronautical Study No. 2022-ANE-6220-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 5 Location: Berlin, CT

Latitude: 41-38-16.66N NAD 83

Longitude: 72-44-38.98W

Heights: 93 feet site elevation (SE)

35 feet above ground level (AGL) 128 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6220-OE

Signature Control No: 554969193-555828456 Stephanie Kimmel Specialist (TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6220-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 128 feet above mean sea level.

**Location:** The structure will be located 6.23 nautical miles southeast of 4B8 Airport reference point.

### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

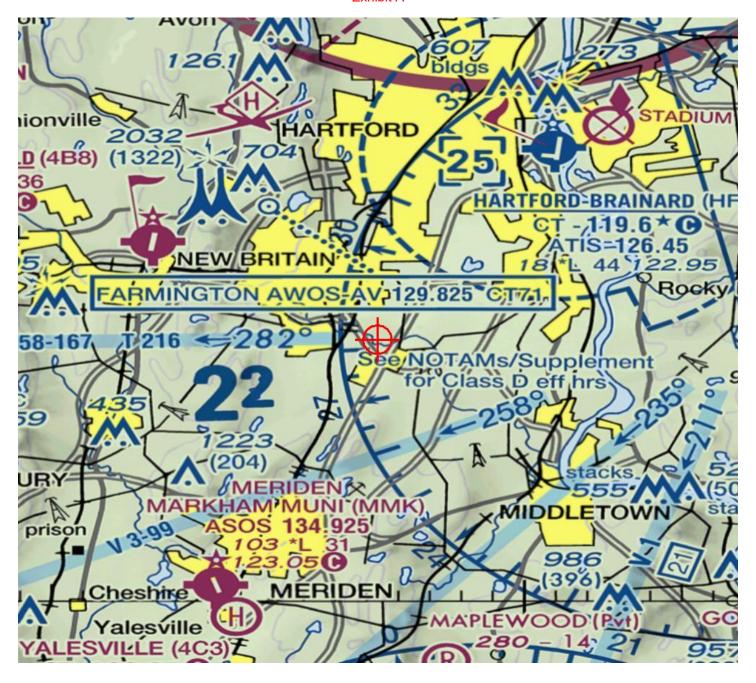
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

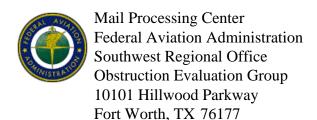
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6220-OE Exhibit A





Aeronautical Study No. 2022-ANE-6221-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 6 Location: Berlin, CT

Latitude: 41-38-16.33N NAD 83

Longitude: 72-44-39.10W

Heights: 93 feet site elevation (SE)

35 feet above ground level (AGL) 128 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6221-OE

Signature Control No: 554969194-555828458

(TMP)

Stephanie Kimmel Specialist

## Additional Condition(s) or Information for ASN 2022-ANE-6221-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 128 feet above mean sea level.

**Location:** The structure will be located 6.24 nautical miles southeast of 4B8 Airport reference point.

### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

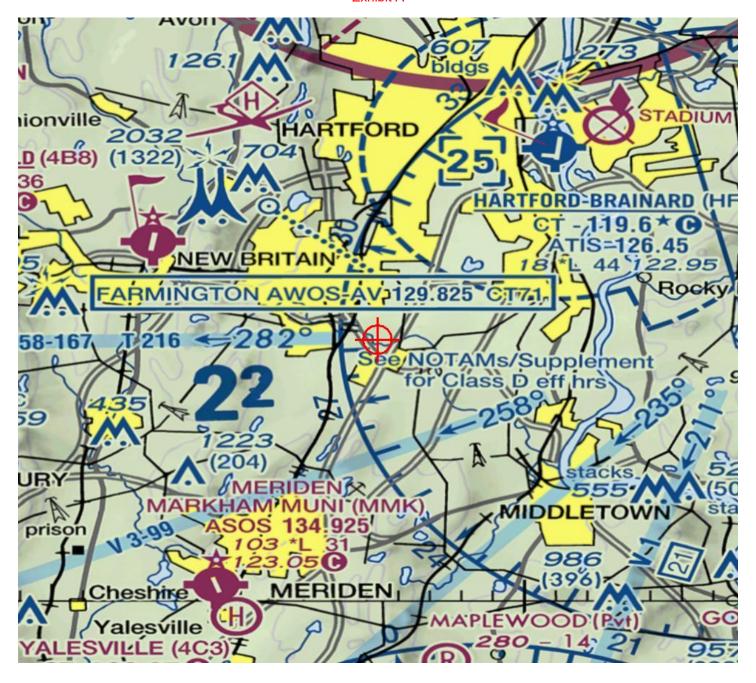
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

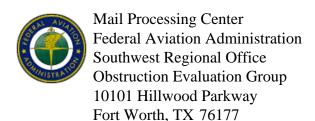
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6221-OE Exhibit A





Aeronautical Study No. 2022-ANE-6222-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 7
Location: Berlin, CT

Latitude: 41-38-15.68N NAD 83

Longitude: 72-44-41.75W

Heights: 98 feet site elevation (SE)

35 feet above ground level (AGL) 133 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6222-OE

Signature Control No: 554969195-555828452 Stephanie Kimmel

Specialist

(TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6222-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 133 feet above mean sea level.

**Location:** The structure will be located 6.21 nautical miles southeast of 4B8 Airport reference point.

### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

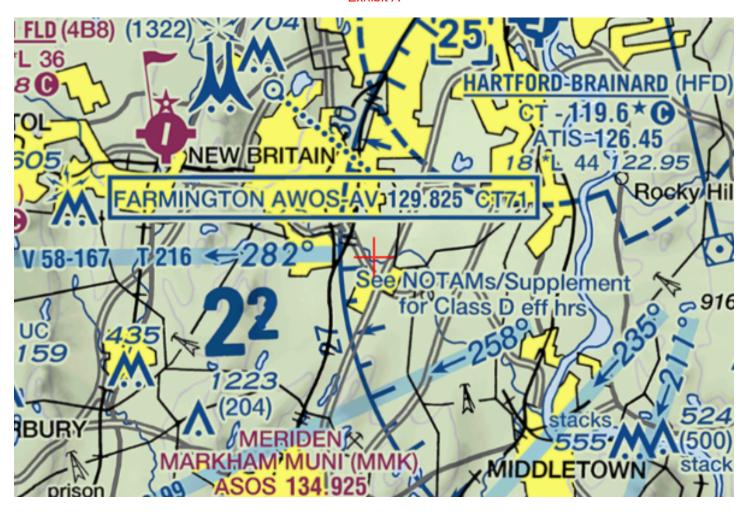
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

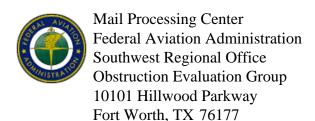
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6222-OE Exhibit A





Aeronautical Study No. 2022-ANE-6223-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 8 Location: Berlin, CT

Latitude: 41-38-14.32N NAD 83

Longitude: 72-44-44.23W

Heights: 96 feet site elevation (SE)

35 feet above ground level (AGL) 131 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6223-OE

Signature Control No: 554969196-555828460 Stephanie Kimmel Specialist (TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6223-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 131 feet above mean sea level.

**Location:** The structure will be located 6.2 nautical miles southeast of 4B8 Airport reference point.

#### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

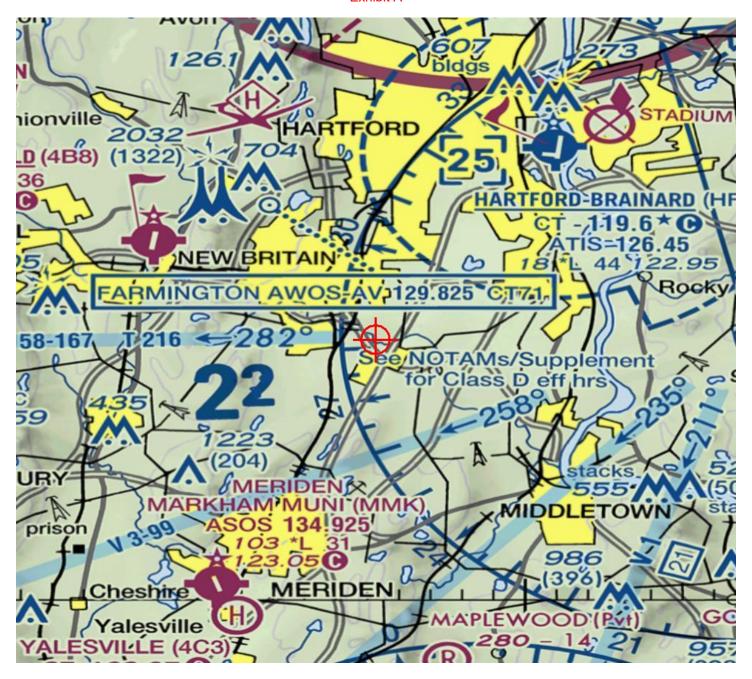
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

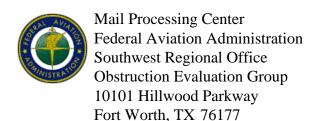
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6223-OE Exhibit A





Aeronautical Study No. 2022-ANE-6224-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 9
Location: Berlin, CT

Latitude: 41-38-14.39N NAD 83

Longitude: 72-44-45.60W

Heights: 96 feet site elevation (SE)

35 feet above ground level (AGL) 131 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6224-OE

Signature Control No: 554969197-555828457 Stephanie Kimmel

(TMP)

Stephanie Kimmel Specialist

## Additional Condition(s) or Information for ASN 2022-ANE-6224-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 131 feet above mean sea level.

**Location:** The structure will be located 6.18 nautical miles southeast of 4B8 Airport reference point.

#### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

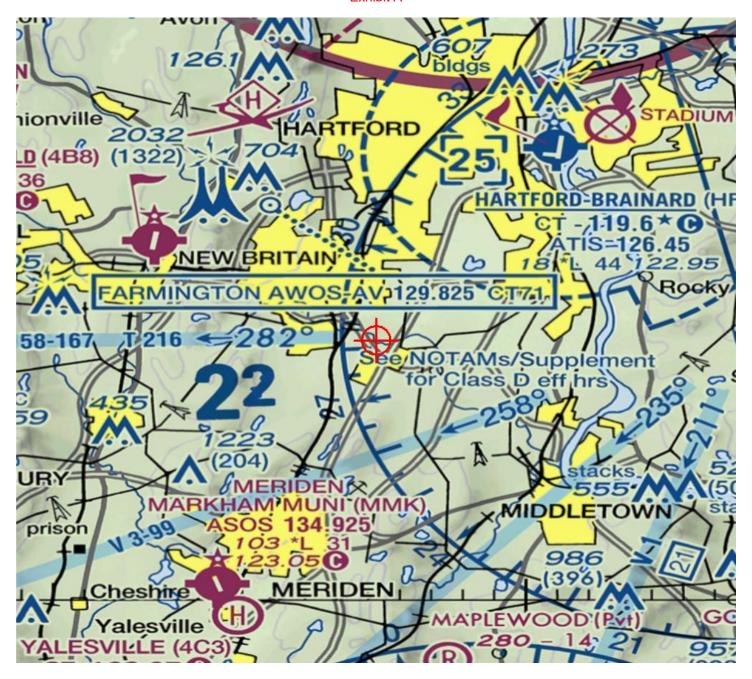
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

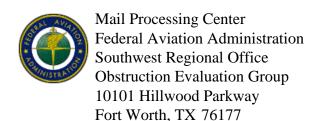
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6224-OE Exhibit A





Aeronautical Study No. 2022-ANE-6225-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 10 Location: Berlin, CT

Latitude: 41-38-15.86N NAD 83

Longitude: 72-44-45.70W

Heights: 96 feet site elevation (SE)

35 feet above ground level (AGL) 131 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6225-OE

Signature Control No: 554969198-555828453 Stephanie Kimmel Specialist (TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6225-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 131 feet above mean sea level.

**Location:** The structure will be located 6.17 nautical miles southeast of 4B8 Airport reference point.

#### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

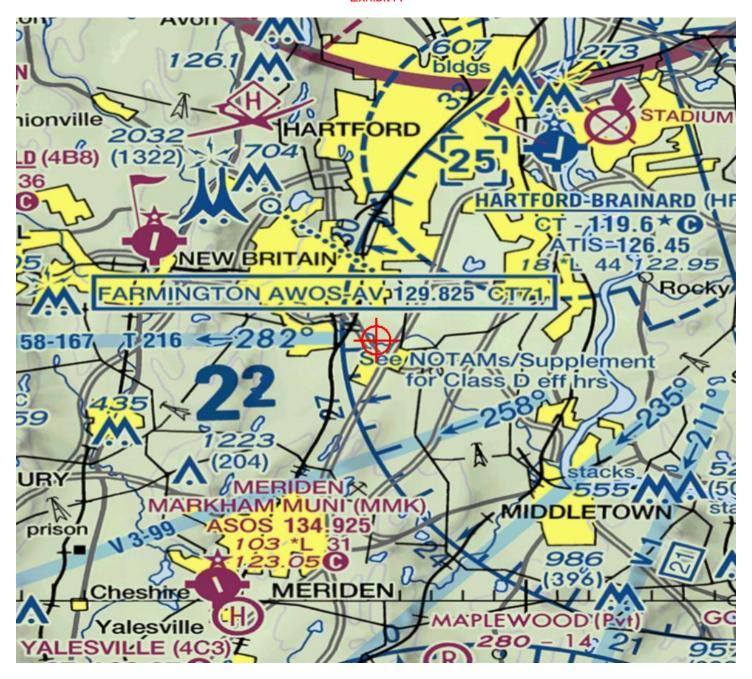
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

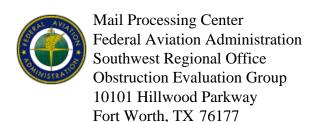
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6225-OE Exhibit A





Aeronautical Study No. 2022-ANE-6226-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 11 Location: Berlin, CT

Latitude: 41-38-18.13N NAD 83

Longitude: 72-44-44.84W

Heights: 98 feet site elevation (SE)

35 feet above ground level (AGL) 133 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6226-OE

Signature Control No: 554969199-555828454 Stephanie Kimmel Specialist

(TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6226-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 133 feet above mean sea level.

**Location:** The structure will be located 6.16 nautical miles southeast of 4B8 Airport reference point.

### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

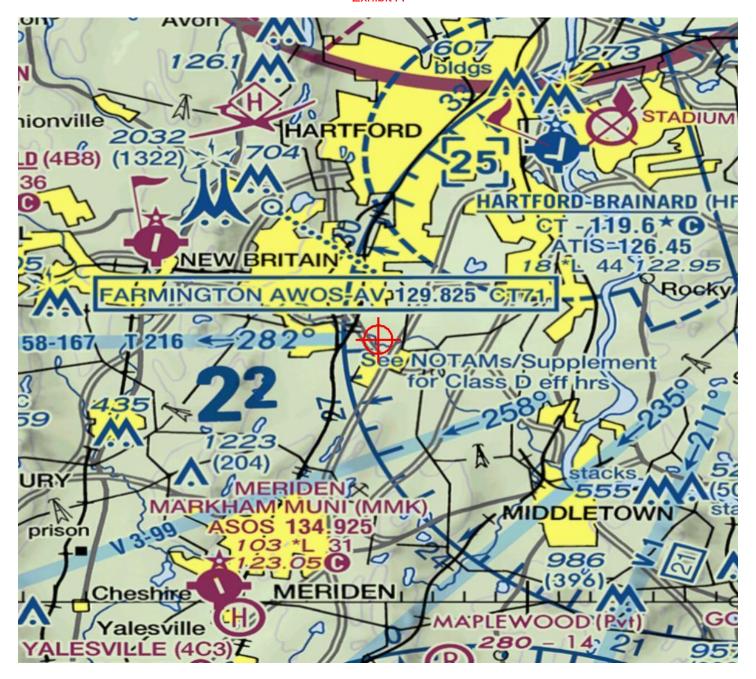
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

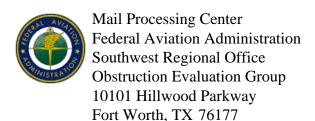
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6226-OE Exhibit A





Aeronautical Study No. 2022-ANE-6227-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

#### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 12 Location: Berlin, CT

Latitude: 41-38-19.23N NAD 83

Longitude: 72-44-44.99W

Heights: 96 feet site elevation (SE)

35 feet above ground level (AGL) 131 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

#### \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6227-OE

Signature Control No: 554969200-555828464 Stephanie Kimmel Specialist (TMP)

## Additional Condition(s) or Information for ASN 2022-ANE-6227-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 131 feet above mean sea level.

**Location:** The structure will be located 6.15 nautical miles southeast of 4B8 Airport reference point.

### Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

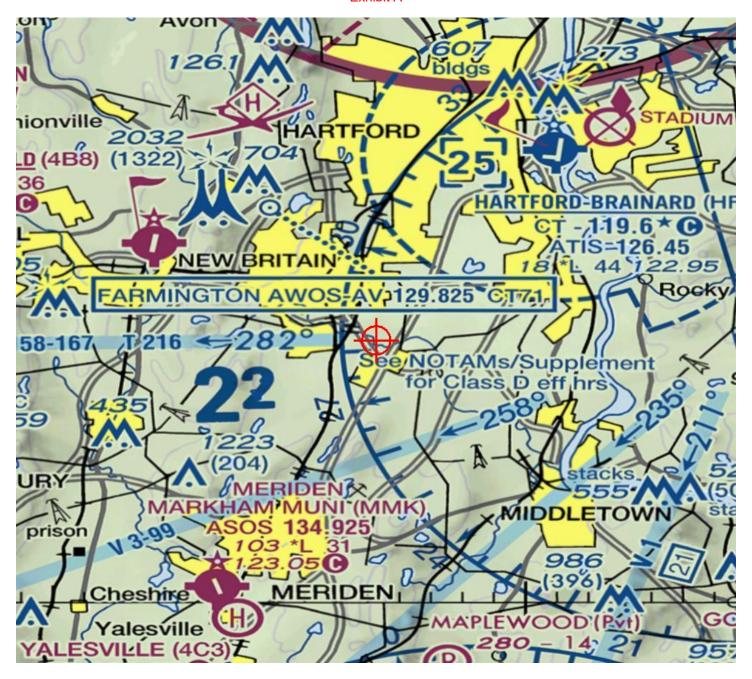
Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

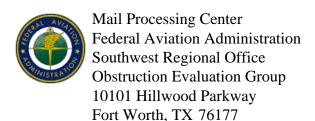
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

# Sectional Map for ASN 2022-ANE-6227-OE Exhibit A





Aeronautical Study No. 2022-ANE-6228-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane Point 13 Location: Berlin, CT

Latitude: 41-38-20.65N NAD 83

Longitude: 72-44-44.38W

Heights: 93 feet site elevation (SE)

35 feet above ground level (AGL) 128 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

## \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6228-OE

Signature Control No: 554969201-555828462 Stephanie Kimmel Specialist (TMP)

# Additional Condition(s) or Information for ASN 2022-ANE-6228-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 128 feet above mean sea level.

**Location:** The structure will be located 6.14 nautical miles southeast of 4B8 Airport reference point.

## Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

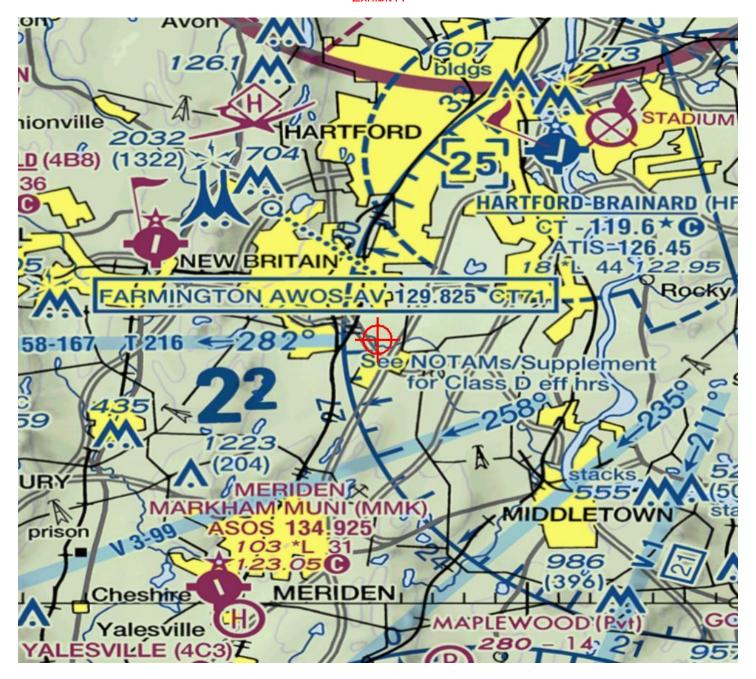
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

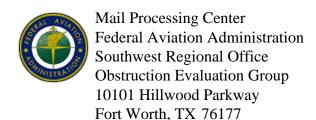
Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

# Sectional Map for ASN 2022-ANE-6228-OE Exhibit A





Aeronautical Study No. 2022-ANE-6229-OE

Issued Date: 09/30/2022

Robert Burns All-Points Technology Corporation - Engineering 3 Saddlebrook Dr Killingworth, CT 06419

### \*\*DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE\*\*

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure: Crane HP Location: Berlin, CT

Latitude: 41-38-17.34N NAD 83

Longitude: 72-44-42.72W

Heights: 105 feet site elevation (SE)

35 feet above ground level (AGL) 140 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

## \*\*SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION\*\*

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

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This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (404) 305-6582, or Stephanie.Kimmel@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2022-ANE-6229-OE

Signature Control No: 554969202-555828463 Stephanie Kimmel (TMP)

Stephanie Kimme Specialist

# Additional Condition(s) or Information for ASN 2022-ANE-6229-OE Exhibit A

**Proposal:** To construct and/or operate a(n) Crane to a height of 35 feet above ground level, 140 feet above mean sea level.

**Location:** The structure will be located 6.19 nautical miles southeast of 4B8 Airport reference point.

## Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

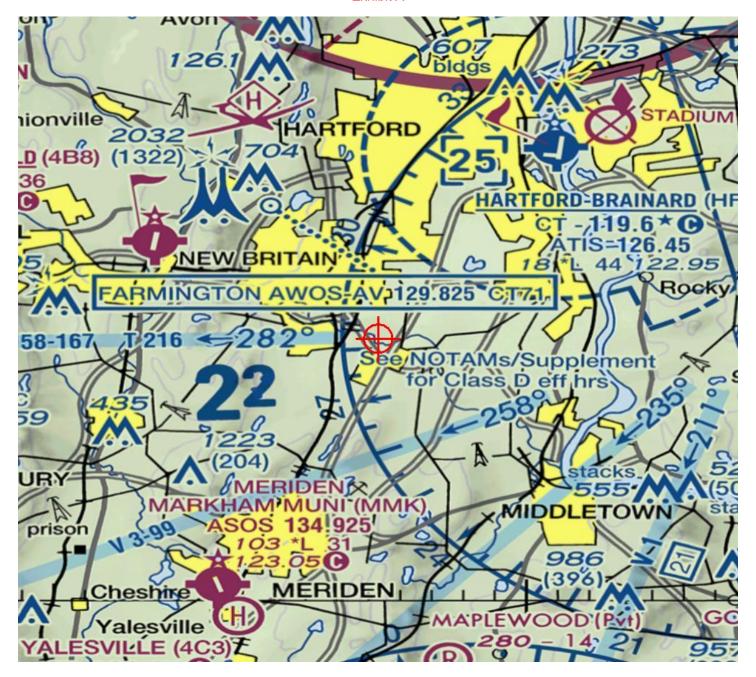
Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 M.

This determination expires on 03/30/2024 unless extended, revised, or terminated by the issuing office.

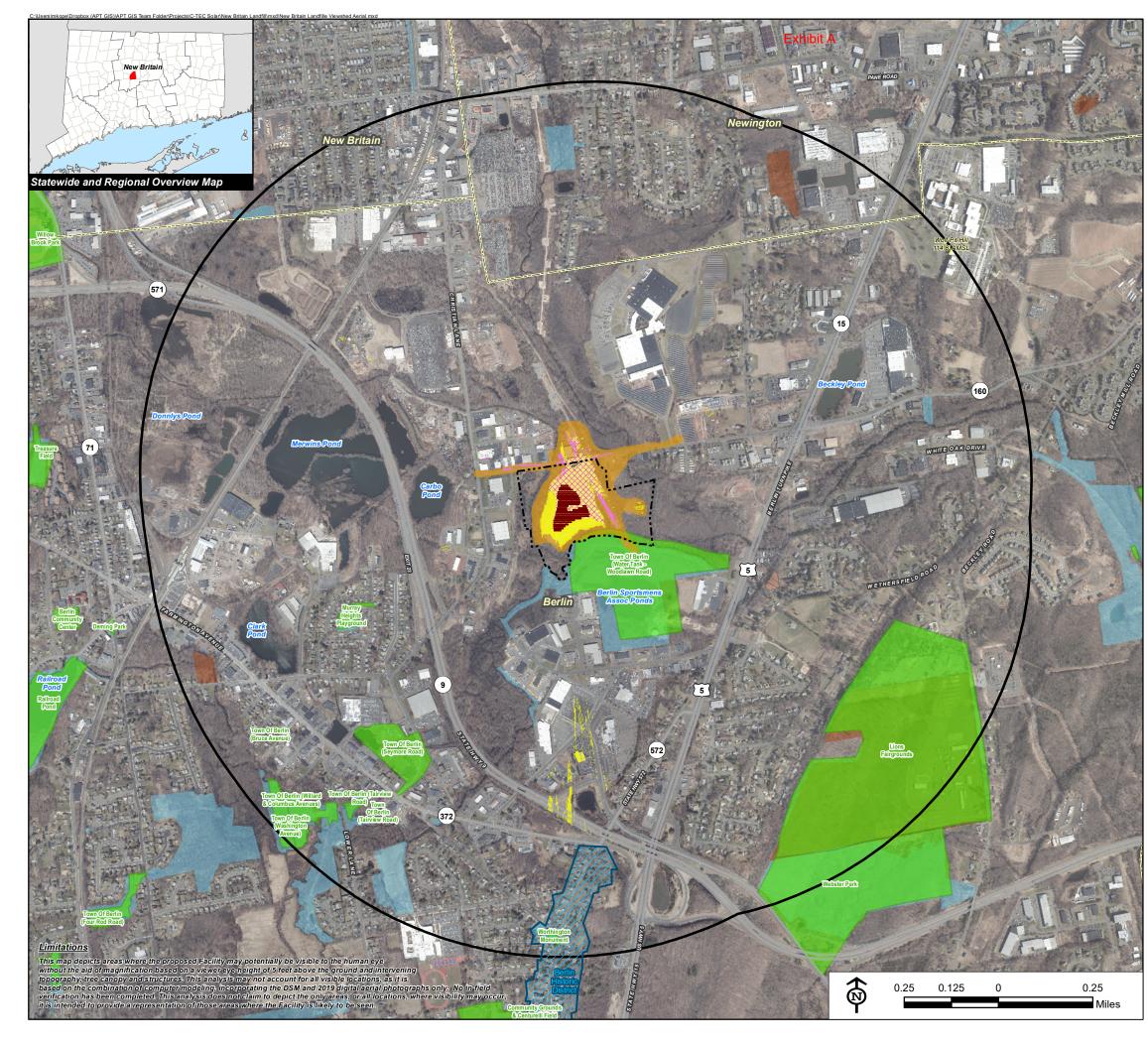
NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

# Sectional Map for ASN 2022-ANE-6229-OE Exhibit A



# **APPENDIX F**

# VISIBILITY DOCUMENTATION





# **Viewshed Analysis Map**

Proposed Solar Energy Facility
New Britain Landfill
Deming Road
Berlin, Connecticut

Proposed solar modules to be mounted on approximate 10' AGL support structures. Proposed interconnect utility poles to be approximately 40' AGL. Forest canopy height and topographic contours are derived from LiDAR data. Study area encompasses a 1-mile radius and includes 2,792 acres. Information provided on this map has not been field verified. Base Map Source: 2019 Aerial Photograph (CTECO) Map Date: September 2022

### Legend

Site
Study Area (1-Mile Radius)

Interconnection Utility Pole

Solar Modules

Areas of Potential Seasonal Visibility, Proposed Utility Poles and/o Modules (26 Acres)

#### Predicted Year-Round Visibility (23 Acres Total)

Proposed Modules Only (9 Acres)
Proposed Utility Poles Only (2 Acres)

Proposed Modules and Utility Poles (12 Acres)

Municipal Boundary

Scenic Highway

Berlin Historic District (NRHP)

DEEP Boat Launches

Municipal and Private Open Space Property

State Forest/Park

Protected Open Space Property

Federal
Land Trust
Municipal

Municipal
Private
State

#### Data Sources:

#### Physical Geography / Background Data

A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points. The first return LiDAR LAS values, associated with the highest feature in the landscape (such as a treetop or top of building), were used to capture the natural and built features on the Earth's surface beyond the approximate limits of clearing associated with the proposed solar facility. The "bare-earth" return values were utilized to reflect proposed conditions where vegetative clearing associated with the proposed solar facility would occur.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

#### Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

Connecticut Forest & Parks Association, Connecticut Walk Books East & West

#### <u>Other</u>

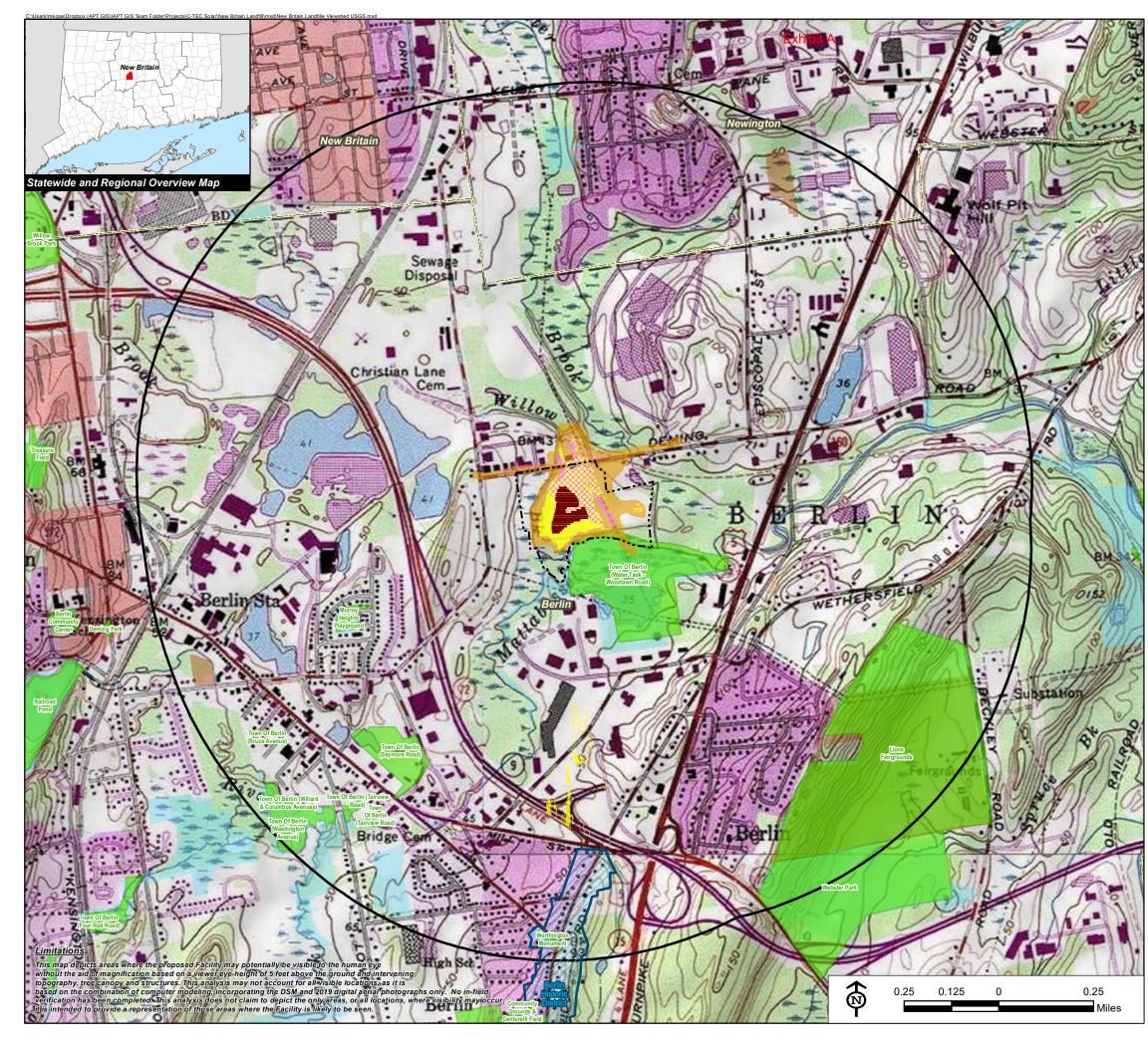
CTDOT Scenic Strips (based on Department of Transportation data)

#### Note

\*\*Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.









## **Viewshed Analysis Map**

Proposed Solar Energy Facility
New Britain Landfill
Deming Road
Berlin, Connecticut

Proposed solar modules to be mounted on approximate 10' AGL support structures. Proposed interconnect utility poles to be approximately 40' AGL. Forest canopy height and topographic contours are derived from LiDAR data. Study area encompasses a 1-mile radius and includes 2,792 acres. Information provided on this map has not been field verified. Base Map Source: Hartford South, CT (1992), Meriden, CT (1992), Middletown, CT (1992), and New Britain, CT (1992)

## Legend

Site
Study Area (1-Mile Radius)
Interconnection Utility Pole
Solar Modules
Areas of Potential Seasonal Visibility, Proposed Utility Poles and/or Modules (26 Acres)

Predicted Year-Round Visibility (23 Acres Total)
Proposed Modules Only (9 Acres)
Proposed Utility Poles Only (2 Acres)
Proposed Modules and Utility Poles (12 Acres)

Proposed Modules and Utility Poles (12 Acres)
Municipal Boundary

Trail
Scenic Highway

Municipal and Private Open Space Property

Protected Open Space Property

Federal
Land Trust
Municipal
Private
State

#### Data Sources:

#### Physical Geography / Background Data

A digital surface model (DSM) was created from the State of Connecticut 2016 LiDAR LAS data points.

The first return LiDAR LAS values, associated with the highest feature in the landscape (such as a treetop or top of building), were used to capture the natural and built features on the Earth's surface beyond the approximate limits of clearing associated with the proposed solar facility. The "bare-earth" return values were utilized to reflect proposed conditions where vegetative clearing associated with the proposed solar facility would occur.

Municipal Open Space, State Recreation Areas, Trails, County Recreation Areas, and Town Boundary data obtained from CT DEEP. Scenic Roads: CTDOT State Scenic Highways (2015); Municipal Scenic Roads (compiled by APT)

#### Dedicated Open Space & Recreation Areas

Connecticut Department of Energy and Environmental Protection (DEEP): DEEP Property (May 2007; Federal Open Space (1997); Municipal and Private Open Space (1997); DEEP Boat Launches (1994)

Connecticut Forest & Parks Association, Connecticut Walk Books East & West

#### <u>Other</u>

CTDOT Scenic Strips (based on Department of Transportation data)

#### Notes

\*\*Not all the sources listed above appear on the Viewshed Maps. Only those features within the scale of the graphic are shown.



