



STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

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CERTIFIED MAIL RETURN RECEIPT REQUESTED

September 6, 2016

Brad N. Mondschein, Esq.
Pullman & Comley LLC
90 State House Square
Hartford, CT 06103-3702

RE: **PETITION NO. 1247** – C-TEC Solar, LLC petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed construction, maintenance, and operation of a 3.75 MW solar photovoltaic electric generating facility located at 1 Ballard Road, Thompson, Connecticut.

Dear Attorney Mondschein:

At a public meeting held on September 1, 2016, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need, with the following conditions:

1. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
3. The Petitioner shall prepare a Development and Management Plan (D&M) for this site in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Thompson for comment and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) A final site plan including, but not limited to, the electrical interconnection design;
 - b) Final details of the Vernal Pool Buffer Enhancement Plan (VPBEP) including associated landscaping and description of how such landscaping would further mitigate visual impacts on the Airline Trail; and
 - c) The name and title of the environmental monitor responsible for overseeing the implementation of the VPBEP;

4. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
5. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of Thompson;
6. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
7. The facility owner/operator shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v;
8. This Declaratory Ruling may be transferred, provided the facility owner/operator/transferor is current with payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v and the transferee provides written confirmation that the transferee agrees to comply with the terms, limitations and conditions contained in the Declaratory Ruling, including timely payments to the Council for annual assessments and invoices under Conn. Gen. Stat. §16-50v; and
9. If the facility owner/operator is a wholly owned subsidiary of a corporation or other entity and is sold/transferred to another corporation or other entity, the Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the petition dated July 19, 2016, and supplemental information dated August 16, 2016 and August 19, 2016

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,



Robert Stein
Chairman

RS/MP/cm

Enclosure: Staff Report dated September 1, 2016

c: The Honorable Ken L. Beausoleil, First Selectman, Town of Thompson
Mary Ann Chinatti, Director of Planning and Development, Town of Thompson



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Petition No. 1247

C-TEC Solar, LLC

1 Ballard Road, Thompson

Staff Report

September 1, 2016

Introduction

On July 19, 2016, C-TEC Solar, LLC (C-TEC or Petitioner) submitted a petition to the Connecticut Siting Council (Council) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need (Certificate) is required for the construction, operation and maintenance of an approximately 3.75 megawatt (MW) direct current (DC), or approximately 2.70 MW alternating current (AC), solar photovoltaic generating facility located at 1 Ballard Road in Thompson, Connecticut. Council member Michael Harder and Michael Perrone of the Council staff visited the site on August 8, 2016 to review this proposal. Kelly O'Donnell, Esq., Pullman & Comley LLC (representing C-TEC); Josh Caley, Project Developer, C-TEC; Brandon Pizzoferrato, Project Manager, C-TEC; Brad Parsons, Project Engineer, All Points Technology Corporation, P.C. (APT); Matthew Gustafson, Environmental Scientist, APT; Brain Parker, Project Manager, APT; and William Barrette, Property Owner also attended the field review.

Municipal Consultation

The Petitioner has had regular discussions with local officials, including the First Selectman of the Town of Thompson, regarding the proposed project. On or about July 15, 2016, the Petitioner provided formal notice to the Town of Thompson, as well as other State and local officials and agencies and abutting property owners. There are no other municipalities located within 2,500 feet of the proposed project. By letter dated August 22, 2016, the Connecticut Department of Transportation provided comments requesting that C-TEC obtain a Highway Encroachment Permit for any work performed within the State Route 193 right-of-way. No other comments have been received to date.

Public Benefit

The project would be a "grid-side distributed resources" facility, as defined in Connecticut General Statutes (CGS) § 16-1(a)(37). CGS § 16a-35k establishes the State's energy policy, including the goal to "develop and utilize renewable energy resources, such as solar and wind energy, to the maximum practicable extent." The 2013 Connecticut Comprehensive Energy Strategy emphasizes low- or no-emission sources of electric generation and development of more distributed generation. The proposed facility is distributed generation. Specifically, the proposed facility will contribute to fulfilling the State's Renewable Portfolio Standard as a zero emission Class I renewable energy source.

The project would consist of two "agricultural virtual net metering" facilities, as defined in CGS §16-244u(7)(B), as a Class I renewable energy source facility that is operated as part of a business for the purpose of agriculture that is served by an electric distribution company on land owned or controlled by an agricultural customer host and serves the electricity needs of the agricultural customer host and its beneficial accounts; is located within the same electric distribution company service territory as the



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agricultural customer host and its beneficial accounts; and has a nameplate capacity rating of three MW or less.

Beneficial accounts are defined as an in-state retail end user of an electric distribution company designated by an agricultural customer host in such electric distribution company's service area to receive virtual net metering credits from an agricultural net metering facility. The project would produce virtual net metering credits for municipal beneficial accounts.

Proposed to be located on the same parcel and to be installed simultaneously, the two facilities are properly before the Council as part of one petition for a declaratory ruling for a cumulative evaluation of compliance with air and water quality standards of the Department of Energy and Environmental Protection (DEEP) pursuant to CGS §16-50k(a).

Proposed Site

The project would be located on 14 acres of the central portion of an approximately 49.3 acre parcel owned by William Barrette. The property has been used for agricultural activity and mining operations, most recently the growing and harvesting of hay. Corn has also been grown at the site in the past.

The site is located in an industrial zone, designated as the IND Zone. The site is bounded to the west by the Airline Trail and Riverside Drive (Route 12), to the east by an existing electric utility right-of-way and Interstate 395, to the south by wetlands, Quinnetisset Brook, and Ballard Road, and to the north by wetlands, Little Mountain Brook, an undeveloped lot, and Thompson Road (Route 193).

Proposed Project

The solar field would include a total of 11,200 solar photovoltaic modules (with 83 inverters) on fixed rack systems oriented to the south. These panels would be tilted on an angle of 25 degrees with the horizontal. The top edges of the solar panels would be approximately 7-foot 10-inches above grade, as a maximum.

A storage shed on a 20-foot by 20-foot concrete pad would be installed to store agricultural equipment. Utilities would run underground from the solar arrays to a 15-foot by 20-foot electrical equipment pad to located northeast of the solar arrays and adjacent to the storage shed. Utilities would continue overhead to the north via six utility poles that would be installed on the subject property. The solar project would interconnect with Eversource's existing overhead three-phase distribution line that runs parallel to Thompson Road (on the north side of the road). If approved, staff suggests that the electrical utility interconnection be included in the Development and Management Plan (D&M Plan).

A small amount of the electrical energy output would power the storage shed, roughly 12 to 50 kilowatt-hours (kWh) per year. The majority of the estimated 4,875,000 kWh per year generated would be supplied to the grid and produce virtual net metering credits to be sold to other municipalities in the state.

The Petitioner originally did not propose a fence for the facility. The Petitioner is now proposing to install a six-foot fence around the perimeter of entire facility. There would be no separate fence for the electrical equipment pad because it would be located within the larger fenced facility and would have bollards around it. A gate would be installed in the northeast corner of the fence, adjacent to

the electrical equipment pad. If approved, staff suggests that the final fence design be included in the D&M Plan.

The Petitioner would utilize an existing 12-foot wide by 770-foot long access road to the north that connects to Thompson Road. Minimal gravel upgrades would be needed for such access.

Environment, Cultural and Scenic Values

The solar panels total about 10.75 acres in area and would all be located in uplands. The total project footprint is approximately 14 acres. Given that much of the site is already clear, site development would require less than one acre of tree clearing in order to minimize shading losses. Specifically, approximately 0.84 acres of trees in upland areas to the south would be cleared. The Petitioner has performed a carbon debt analysis. While the loss of trees necessarily reduces carbon capturing ability, the carbon dioxide emissions reductions due to the solar power displacing more traditional generation (which includes fossil-fueled generation) results in a very rapid "carbon payback" of less than one day of full energy production because of the small clearing area relative to the generating capacity of the solar facility. Thus, the proposed project would result in a net reduction in carbon dioxide emissions for the environment.

The solar rack posts would be driven into the ground. If a post hits mechanical refusal e.g. ledge, the post would be supported with concrete inside a sonotube. The installation of an infiltration basin and reconstruction of the access drive requires approximately 300 cubic yards of material to be generated via cut. This cut material would be used on-site to fill any existing depressions. No excess material would be trucked off-site.

A stormwater management plan has been developed by APT in accordance with the *2004 Connecticut Stormwater Quality Manual* (2004 Manual). The proposed development activities have been designed to mimic the existing drainage patterns and to match or reduce pre-development peak discharge rates. An erosion and sedimentation control plan was included with the Petition, consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control* (2002 Guidelines).

A Decommissioning Plan was included in the Petition and has provisions for project removal after a service life of up to 25 years.

The project would have no adverse environmental effect to air or water quality. The solar project would not produce air emissions of regulated air pollutants or greenhouse gases during operation. In addition, the project is not located within a DEEP-designated Aquifer Protection Area. The proposed site is located within a groundwater area identified as "GA" by DEEP and has two surface water bodies, Little Mountain Brook located on the northeast portion of the site and Quinnetisset Brook located on the southern portion, that are classified as Class A by DEEP. The panels would be installed on a shallow, post-driven rack system, and the facility would be unstaffed with no potable water uses or sanitary discharges. Prior to and throughout the duration of construction, sedimentation and erosion controls will be installed and maintained in accordance with the 2002 Guidelines. Once operative, the stormwater generated by the proposed development would be properly handled and treated in accordance with the 2004 Manual. Thus, the proposed project is not expected to adversely impact water resources.

The proposed project would be located in the Federal Emergency Management Agency's (unshaded) Zone C, an area located outside of the 100-year and 500-year flood zones.

There are two wetlands in proximity to the project. Wetland 1 is a riparian corridor associated with a perennial stream identified as Little Mountain Brook. Wetland 1, located in the northern and

northeast portion of the parcel, is approximately 50 feet north of the closest solar panel in the north-central portion of the proposed facility. The existing 20-foot wide access drive already crosses Wetland 1 in its eastern extents conveying flows via twin 36-inch reinforced concrete pipe culverts. No new direct wetland impacts are proposed. Wetland 2 consists of a riparian corridor associated with a perennial stream identified as Quinnatisset Brook. Wetland 2, located in the southern portion of the parcel, is approximately 83 feet southeast of the closest solar panel in the southwestern portion of the facility. No direct impacts are expected to occur to any wetland resources. Potential short term temporary wetland impacts associated with project construction would be minimized by the Erosion and Sedimentation Control Plan, consistent with the 2002 Guidelines. Potential long term secondary impacts to wetland resources possibly associated with operation of the facility would be minimized by the fact that that the facility would generate negligible traffic because it is unstaffed, and it minimizes the creation of impervious surfaces by using an existing gravel access drive and treating the majority of the surface around the solar installation with native grass/vegetation.

A vernal pool survey was conducted on April 6, 2016 by APT. Two vernal pool amphibian species were confirmed breeding on the site: the wood frog and the spotted salamander. A total of 30 wood frog egg masses and 90 spotted salamander egg masses were observed during the survey. One vernal pool was found during the survey. Vernal Pool 1 is a depressional pool located in the western extent of the site. The pool is located adjacent to the northwest corner of the project area within the forested edge of the open field. As a result, a majority of the intact supporting upland habitat is located away from the project area to the north, east and west. Given that a minimum of two breeding indicator species were found, and the minimum egg mass threshold of 25 was met or exceeded, Vernal Pool 1 is considered a Tier 1 vernal pool under the Calhoun and Klemens 2002 Best Development Practices (2002 BDPs). The vernal pool assessment considers two management zones, referred to as the Vernal Pool Envelope (VPE), located within 100 feet of the vernal pool, and the Critical Terrestrial Habitat (CTH), located between 100 feet and 750 feet of the vernal pool. There would be no development within the VPE. With respect to the CTH, there is approximately 12 percent existing development area. Post-construction, this would increase to 28 percent. Because the 2002 BDPs recommend no more than 25 percent development within the CTH, Vernal Pool 1 would slightly exceed the 2002 BDPs guidelines. The proposed CTH development increase is within suboptimal habitat associated with early open field habitat consisting of sparse vegetation and little to no duff layer.

A Vernal Pool Buffer Enhancement Plan is proposed to compensate for loss of suboptimal habitat within the CTH. Specifically, C-TEC would plant and under sow a portion of the open field habitat south of Vernal Pool 1 and located within the VPE. Trees would be planted to stimulate forest regeneration where feasible (outside of the shading effects areas). Within the shading influence of the project, scrub/shrub and wildflower plantings will occur. Test pits within this area revealed the need for increased fertility to support this mitigation plan. As such, it is proposed that topsoil free of noxious seed be added to the vernal pool mitigation areas to sufficient depths to support the recommended plants. All mitigation work would be conducted under the supervision and direction of an environmental monitor experienced in vernal pool buffer enhancement projects. If approved, staff suggests that the final, specific details of the Vernal Pool Buffer Enhancement Plan (VPBEP) and the name and title of the environmental monitor responsible for overseeing the implementation of the VPBEP be provided in the D&M Plan.

In addition, the Petitioner included Best Management Practices that would be protective of wetlands, the vernal pool, and vernal pool herpetofauna (i.e., spotted salamander, wood frog, turtles, etc.). These practices involve erosion and sedimentation controls, contractor education, petroleum materials storage and spill prevention plans, herpetofauna protective measures, herbicide and pesticide restrictions, and reporting requirements.

By letter dated June 6, 2016, the Connecticut DEEP noted that no negative impacts to State-listed species are anticipated as a result of the proposed project. APT, C-TEC's consultant, notes that the northern long-eared bat (NLEB), a federally-listed threatened species and state-listed endangered species may occur in the vicinity of the site. However, there are no known maternity roost trees in Connecticut, and the nearest NLEB habitat resource is located in East Granby, approximately 43 miles to the west. Thus, the proposed project is not likely to result in an adverse impact or incidental take of the NLEB.

According to the Connecticut Supreme Court, agricultural land is not a natural resource; agricultural land is an economic resource. The Connecticut Department of Agriculture has not purchased any development rights to the site property as part of the State Program for the Preservation of Agricultural Land. Although approximately 7.4 acres of the 10.75 acres of proposed solar panels would be located within the mapped areas of Statewide Important Farmland Soils, because of past mining operations (circa 2004) most, if not all, of the original soil material has been removed and/or replaced. Furthermore, according to the Town of Thompson Tax Assessor records, the Public Act 490 land use code indicates the 49.3 acre parcel is classified as "Tillable D – good to fair."

The Petitioner submitted a Project Review Cover Form to the State Historic Preservation Office (SHPO). In SHPO's response, SHPO indicated that no historic properties would be affected by the proposed project, and no further review is requested.

The proposed project is expected to meet the DEEP noise standards at the property boundaries.

The nearest off-site residence is located at 42 Thompson Road, approximately 888 feet to the north of the edge of the proposed facility. Due to intervening topography, vegetation and distance, views of the proposed facility would not be expected from this residence. While some views may be possible from Interstate 395, the project is otherwise set back sufficiently from abutting properties and other roads so that the proposed project would not be visible from most off-site locations.

However, some limited views of the solar facility from the Airline Trail to the west may be possible. Specifically, seasonal and year-round views of a small portion of the northeast corner of the solar facility may be possible while accessing the trail, but would be mitigated by existing coniferous and deciduous trees along the edge of the rail-trail corridor. In addition, views of this section of the facility would be further minimized by wetland restoration plantings associated with the VPBEP.

C-TEC estimates that the project would take about three to four months to construct and energize the proposed facility. Construction hours would typically occur Monday through Sunday, 7:00 a.m. to 7:00 p.m. Federal holidays would be observed. Noise related to construction would be exempt per DEEP noise regulations.

Conclusion

The Petitioner contends that pursuant to CGS § 16-50k(a), the Siting Council shall approve by declaratory ruling the construction or location of "any customer-side distributed resources project or facility or grid-side distributed resources project or facility with a capacity of not more than sixty-five megawatts, as long as such project meets air and water quality standards of the Department of Energy and Environmental Protection." The proposed project meets these criteria. The proposed project will not produce air emissions, will not utilize water to produce electricity, was designed to minimize wetland impacts, and furthers the State's energy policy by developing and utilizing renewable energy resources and distributed energy resources. In addition, as demonstrated above, the proposed project will not have a substantial adverse environmental effect.

Recommendations

Staff recommends inclusion of the following conditions:

1. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes; and
3. The Petitioner shall prepare a Development and Management Plan (D&M) for this site in compliance with Sections 16-50j-60 through 16-50j-62 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Thompson for comment and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
 - a) A final site plan including, but not limited to, the electrical interconnection design; and
 - b) Final details of the Vernal Pool Buffer Enhancement Plan (VPBEP) including associated landscaping and description of how such landscaping would further mitigate visual impacts on the Airline Trail; and
 - c) The name and title of the environmental monitor responsible for overseeing the implementation of the VPBEP.

Figure 1 - Proposed Site Layout Drawing

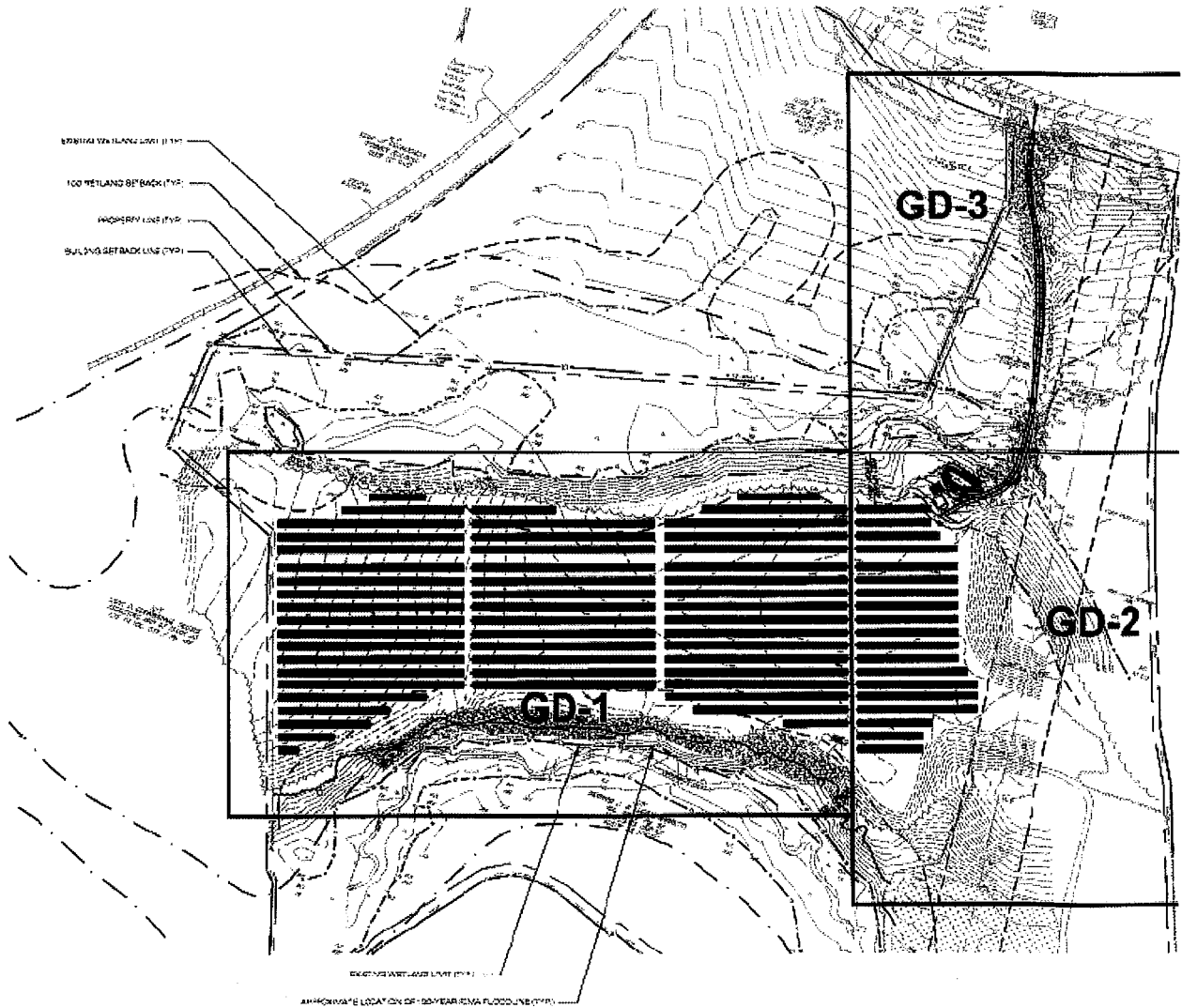
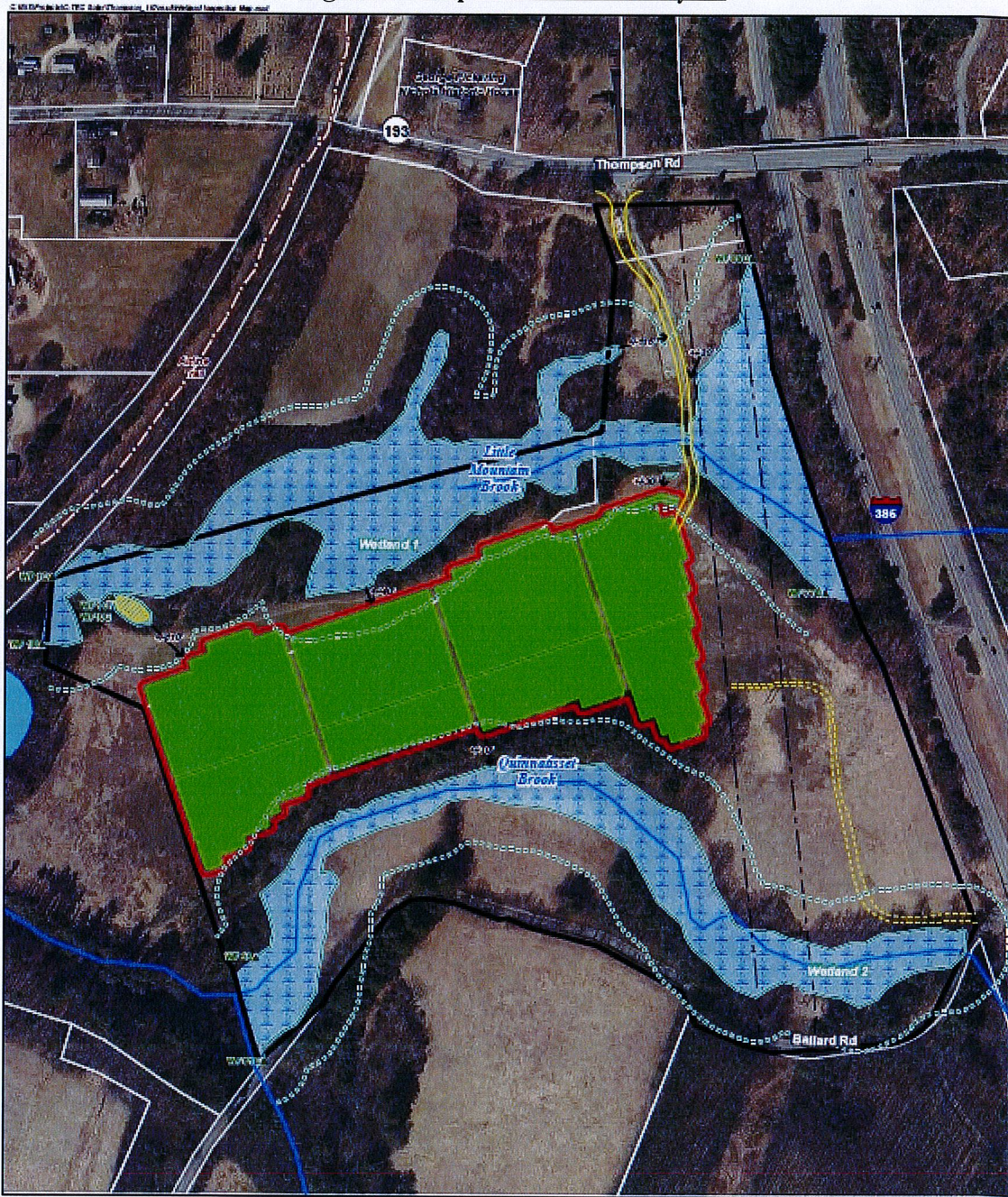


Figure 2 – Proposed Aerial Site Layout



Legend

- Site Boundary
- Ground Mounted Facility
- Solar Module Array
- Access to Facility
- Utility Right-of-Way
- Path
- Trail
- Approximate Assessor Parcel Boundary (CTDEEP)

- CTDEEP Watercourse
- CTDEEP Open Water
- Start/End Wetland Flag
- Wetland Boundary
- 100' Wetland Buffer
- Wetland Area
- Vernal Pool

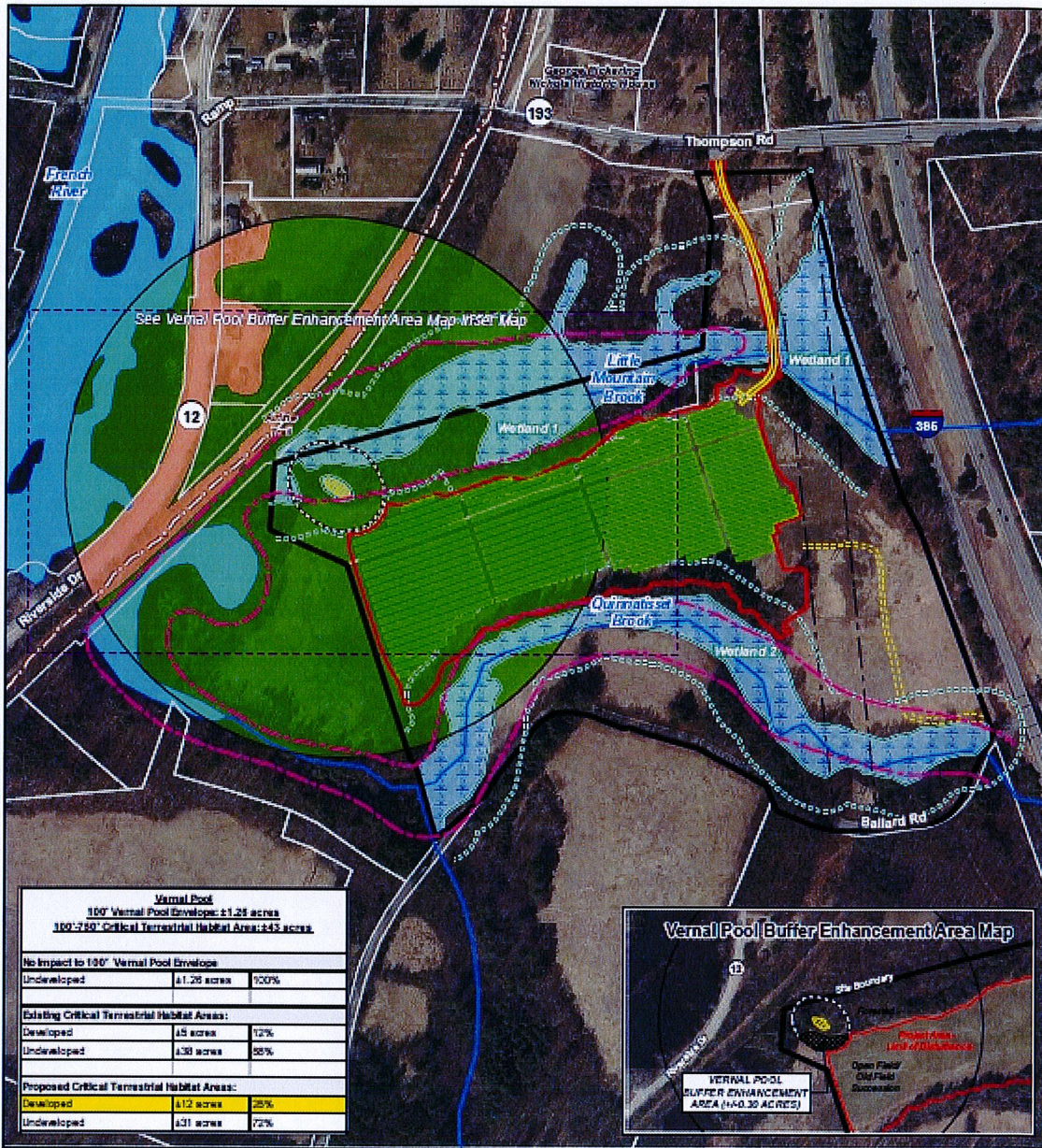
Wetland Inspection Map

Proposed Solar Project
 1 Ballard Road
 Thompson, Connecticut

Map Notes:
 Base Map Source: 2013 Aerial Photograph (CTDEC)
 Map Scale: 1 inch = 300 feet. Map Date: June 2016



Figure 3 – Vernal Pool Analysis and Vernal Pool Buffer Enhancement Area Map



- Legend**
- Site Boundary
 - Project Area - Limit of Disturbance
 - 100-Year Flood Zone Line
 - Ground Mounted Solar Module Array
 - Access to Facility
 - Concrete Pad for Equipment Shed
 - Utility Right-of-Way
 - Path
 - Trail
 - Approximate Assessor Parcel Boundary (CTDEEP)
 - CTDEEP Watercourse
 - CTDEEP Open Water
 - Wetland Boundary
 - 100' Wetland Buffer
 - Wetland Area
 - Vernal Pool
 - 100' Vernal Pool Envelope
 - 100'-750' Critical Terrestrial Habitat Area
 - Critical Terrestrial Habitat
 - Developed
 - Undeveloped

**Figure 6
Vernal Pool Analysis**

Proposed Solar Project
1 Ballard Road
Thompson, Connecticut

Map Notes:
Data Map Source: 2012 Aerial Photograph (CTDEEP)
Map Scale: 1 inch = 400 feet Map Date: July 2016

