December 20, 2017

Melanie Bachman, Esq.
Executive Director
Connecticut Siting Council
Ten Franklin Square
New Britain, CT 06051

RE: PETITION NO. 1323 – Windham 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 three 2.0 Megawatt AC and two 1.0 Megawatt AC solar photovoltaic electric generating facilities on an approximate 43 acre parcel located at 134 Bilton Road, Somers, Connecticut.

Dear Attorney Bachman:

Please find enclosed fifteen (15) copies of Windham Solar LLC's response to the Siting Council's interrogatory requests (Set 2) for Petition No. 1323, which were submitted by the Siting Council to Windham Solar on November 30, 2017.

Regards,

Christopher Little
Vice President
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(651) 268-2053

Petition No. 1323
Interrogatories
Set Two
November 30, 2017

Project Development

CSC BS 1. Please provide Sheet 2 of 14 and Sheet 3 of 14 of Exhibit A to the petition.

Pages 2 and 3 of Exhibit A to the Petition is attached to this response as Exhibit A. Page 2 is the ALTA survey and Page 3 is the main site plan page. Page 3 was included in the electronic PDF submittal, but was omitted from the hard copy submission.

CSC BS 2. Pages 17-18 of the Petition state that the petitioner has contracts with Eversource under the LREC/ZREC Program to sell the renewable energy credits, but does not yet have a contract to sell the energy or capacity. Is the petitioner negotiating a contract to sell the energy or capacity?

The Petitioner is pursuing a contract for energy and capacity from Eversource. The petition for that contract is currently before the Connecticut Public Utilities Regulatory Authority in Docket 16-03-08RE01.

Proposed Site

CSC BS 3. Is solar development proposed for the portion of the site parcel located in Longmeadow, Massachusetts?

As of now, no.

CSC BS 4. Is the site parcel, or any portion thereof, part of the Public Act 490 Program? If so, how does the town land use code classify the parcel(s)? For example, is/are the parcel(s) classified as "Tillable D – good to fair"?

The site parcel is not currently enrolled in Public Act 490.

CSC BS. 5. Has the State of Connecticut Department of Agriculture purchased any development rights for any portions of the proposed site as part of the State Program for the Preservation of Agricultural Land?

No.

CSC BS 6. Does the proposed site contain any Connecticut Prime Farmland Soils? If so, what acreage of prime soils are the solar panels and associated equipment proposed to be located on?

The soil types in the location where Petitioner is proposing to install solar panels and associated equipment is comprised of Narragansett silt loam, 2 to 8 percent slopes and Broadbrook silt loam, 3 to 8 percent slopes. The current USDA Web Soil Survey lists those soils as prime farmland. As described below, however, we are having the soils tested to determine the appropriate classification.

Conn. Gen. Stat. 16-50k(a)(iii) provides that "for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland …, the Department of Agriculture represents, in writing, to the council that such project will not materially affect the status of such land as prime farmland. . . In conducting an evaluation of a project for purposes of subparagraph (B)(iii) of this subsection, the Departments of

Agriculture and Energy and Environmental Protection may consult with the United States Department of Agriculture and soil and water conservation districts."

The Petitioner has requested a letter from the Department of Agriculture confirming that the solar facilities proposed in the petition will not "materially affect the status of the underlying land as prime farmland," assuming, of course, that such soil is prime farmland. We would expect that the determination would be quite easy for the Department of Agriculture.

As the petition describes, the construction and operation of solar facilities will have minimal impact to the soil and have absolutely no impact to ***the status*** of the qualification of the soil under 7 C.F.R. §657. Obviously while the solar facilities exist on the land, no crops would be grown on the land, although the land still would potentially be able to be placed in some type of agricultural use. But the plain language of the statute clearly only refers to the ***status*** of the land under 7 C.F.R. §657, and the construction of the solar farm would have zero possibility of altering the land's classification under 7 C.F.R. §657.

Conn. Gen. Stat. §16-50k defines "prime farmland" as "land that meets the criteria for prime farmland as described in 7 CFR 657, as amended from time to time."

7 CFR Sec. 657.5 provides:

Identification of important farmlands.

a. Prime farmlands--
    1. General. Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods. In general, prime farmlands have an adequate and dependable water supply from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, acceptable salt and sodium content, and few or no rocks. They are permeable to water and air. Prime farmlands are not excessively erodible or saturated with water for a long period of time, and they either do not flood frequently or are protected from flooding. Examples of soils that qualify as prime farmland are Palouse silt loam, 0 to 7 percent slopes; Brookston silty clay loam, drained; and Tama silty clay loam, 0 to 5 percent slopes.
    2. Specific criteria. Prime farmlands meet all the following criteria: Terms used in this section are defined in USDA publications: "Soil Taxonomy, Agriculture Handbook 436"; "Soil Survey Manual, Agriculture Handbook 18"; "Rainfall-erosion Losses From Cropland, Agriculture Handbook 282"; "Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss, Agriculture Handbook 346"; and "Saline and Alkali Soils, Agriculture Handbook 60."
        i. The soils have:
            A. Aquic, udic, ustic, or xeric moisture regimes and sufficient available water capacity within a depth of 40 inches (1 meter), or in the root zone (root zone is the part of the soil that is penetrated or can be penetrated by plant roots) if the root zone is less than 40 inches deep, to produce the commonly grown cultivated crops (cultivated crops include, but are not limited to, grain, forage, fiber, oilseed, sugar beets, sugarcane, vegetables, tobacco, orchard, vineyard, and bush fruit crops) adapted to the region in 7 or more years out of 10; or
            B. Xeric or ustic moisture regimes in which the available water capacity is limited, but the area has a developed irrigation water supply that is dependable (a dependable water supply is one in which enough water is

available for irrigation in 8 out of 10 years for the crops commonly grown) and of adequate quality; or,

C. Aridic or torric moisture regimes and the area has a developed irrigation water supply that is dependable and of adequate quality; and,

ii. The soils have a temperature regime that is frigid, mesic, thermic, or hyperthermic (pergelic and cryic regimes are excluded). These are soils that, at a depth of 20 inches (50 cm), have a mean annual temperature higher than 32 deg. F (0 deg. C). In addition, the mean summer temperature at this depth in soils with an O horizon is higher than 47 deg. F (8 deg. C); in soils that have no O horizon, the mean summer temperature is higher than 59 deg. F (15 deg. C); and,

iii. The soils have a pH between 4.5 and 8.4 in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep; and,

iv. The soils either have no water table or have a water table that is maintained at a sufficient depth during the cropping season to allow cultivated crops common to the area to be grown; and,

v. The soils can be managed so that, in all horizons within a depth of 40 inches (1 meter) or in the root zone if the root zone is less than 40 inches deep, during part of each year the conductivity of the saturation extract is less than 4 mmhos/cm and the exchangeable sodium percentage (ESP) is less than 15; and,

vi. The soils are not flooded frequently during the growing season (less often than once in 2 years); and,

vii. The product of K (erodibility factor) x percent slope is less than 2.0, and the product of I (soils erodibility) x C (climatic factor) does not exceed 60; and

viii. The soils have a permeability rate of at least 0.06 inch (0.15 cm) per hour in the upper 20 inches (50 cm) and the mean annual soil temperature at a depth of 20 inches (50 cm) is less than 59 deg. F (15 deg. C); the permeability rate is not a limiting factor if the mean annual soil temperature is 59 deg. F (15 deg. C) or higher; and,

ix. Less than 10 percent of the surface layer (upper 6 inches) in these soils consists of rock fragments coarser than 3 inches (7.6 cm).

Although the USDA classifies both soil map units as prime farmland, other considerations need to be made before making this determination. Part 622.03 of the National Soil Survey Handbook defines prime farmland clearly states that "***Users of the lists of prime farmland map units should recognize that soil properties are only one of several criteria that are necessary."***

Based on the USDA's definition, the map unit for these soils is not sufficient on its own to determine whether the soils are considered prime farmland. To make this determination, Petitioner has engaged a qualified soil scientist to evaluate the site and the soils to determine whether they meet the USDA's definition of prime farmland. Petitioner will make these results available to the Siting Council upon completion of this work.

However, regardless of the ultimate classification findings, as noted above the impacts to the soil from construction and operation of the facilities are minimal, and thus would have zero possibility of altering the land's classification under 7 C.F.R. §657.

CSC BS 7. Under Connecticut General Statutes §16-50k, "Core forest" is defined as unfragmented forest land that is 300 feet or greater from the boundary of forest land and non-forest land. Small core forests are core forest patches that are less than 250 acres. Medium core forests are core forest patches that are between 250 acres and 500 acres. Large core forests are core forest patches that are greater than 500 acres. Would the removal of the 15.5 acres of trees referenced on page 18 of the petition impact core forest? If so, what type of core forest – small, medium or large?

If the area were considered part of a core forest, then the answer would be yes. Under the original site plan submitted with the petition, the proposed project would impact approximately 5.1 acres (as measured by the limits of the fence-line) of the 6 acres of tree area that are located on the property. The aggregate tree area was measured to be approximately 106 acres in size, so if it has been designated as forestland then it would be a small core forest. Assuming the area has been designated as forestland, an overlay of what would be the core forest is shown on the site plan is included with this response as Exhibit B.

In order to be part of a "core forest" then land must be unfragmented forest land. The term "forest land" is not defined in Conn. Pub. Act 17-218, but it is defined in Conn. Gen. Stat. §12-107b. To our knowledge the land has not been officially classified by the Connecticut State Forester as forest land under Conn. Gen. Stat. §§12-107b and 12-107d.

CSC BS 8. Could the site layout be reconfigured to reduce the number of panels or relocate the panels off the west slope of the central and northern section of the site? Would this reconfiguration reduce the 15.5 acres of tree removal?

Yes. Petitioner has enclosed an alternate site plan, attached as Exhibit "B", which removes the solar facilities entirely outside of the tree area. This would result in the removal of 0 acres of trees from what would be the core forest (assuming the land were considered part of a core forest) and 7.5 acres of trees in the edge area, which would not in any event be considered part of a core forest.

CSC BS 9. If the reconfiguration in question no. 8 is feasible, please submit an alternative site layout depicting the reduction in the number of panels or relocation of the panels off the west slope of the central and northern section of the site and a narrative describing the reconfiguration.

Please refer to the enclosed alternate site plan attached as Exhibit "B".

Energy Production

CSC BS 10. What are the percent losses associated with the operation of the project?

Petitioner anticipates the following losses associated with the production of the solar facility:

Near shading – 3.5%, array incidence losses (IAM) – 1.6%, soiling losses – 3.0%, irradiance level – 0.6%, temperature losses – 2.1%, electrical shading losses – 0.4%, quality (mismatch included) - +0.2%, light induced degradation – 2.0%, ohmic DC wiring losses – 0.3%, inverter efficiency – 1.5%, MPP tracking system – 0.6%, ohmic AC wiring losses – 0.8%, low to medium voltage transformer – 1.1%. We expect an additional 1.0% losses from unavailability and 0.23% from self-consumption (parasitic load).

CSC BS 11. Is the project capable of accommodating a future potential battery energy storage system?

Yes. Battery Energy Storage Systems (BESS) could be installed during initial construction or retrofitted after commercial operation. Although the price of BESS continues to decline at a rapid pace, the technology is still expensive and needs the appropriate applications and compensation to make economic sense. Petitioner has no plans to install a BESS on either of the proposed projects at this time.

CSC BS 12. Would power output be impacted by soft shading of the solar panels, such as air pollution, or hard shading of the solar panels, such as an accumulated solid? If so, would energy production be reduced?

Bird droppings, dust, pollen and other external elements that cover the solar panels is referred to as "soiling". Soiling can impact the production of a solar array, particularly in areas that do not receive a lot of precipitation or during times of drought. In Connecticut, we do not anticipate excessive soiling because the location of the project receives adequate annual precipitation, which naturally cleans the solar modules. During times of drought or if there are excessive bird droppings on the panels, Petitioner would simply clean the solar modules. Cleaning solar modules can be performed by hand or with machinery and there are a number of contractors that have cropped up over the years that perform these cleaning services throughout the country.

Petitioner has accounted for 3.0% soiling losses, which includes soft shading, in its energy production estimates.

Site Components and Solar Equipment

CSC BS 13. Page 19 of the petition indicates WS plans to install (8) 1000-kilowatt inverters, but also references WS may elect to utilize a string inverter design with (133) 60-kilowatt inverters. Under what circumstances would a string inverter design be employed and why? For example, would the installation of a string inverter design decrease the overall footprint of the project?

The key benefit of a string inverter design has to do with the number of "strings" of solar panels that are dependent upon the operation of a single inverter and thus how much of the solar array is dependent upon the operation of that inverter. In the case of the projects being proposed, a 60 kW inverter would have approximately 11 to 12 strings of solar modules (18 modules per string) connected to it. Alternatively, a centralized 500 kW inverter would have approximately 95-100 strings connected to it. In the event of a mechanical failure of an inverter, the string inverter design would only lose production from 11-12 strings of solar modules, whereas if a central inverter fails, a much larger portion of the array would stop producing energy. The idea behind string inverter architecture is to limit the amount of energy lost due to an inverter failure. There are certainly benefits to a central inverter as well, however, Petitioner has initially selected a string inverter for this design because Eversource requires the interconnecting voltage to their transformer to be 480V if Eversource provides the transformer. Most string inverters have a 480V output, whereas a central inverter is typically around 390V. The only way to use a centralized inverter with the Eversource provided transformers is to use a secondary transformer, which would result in energy losses of around 2-3%.

The final inverter architecture will be selected once the electrical engineering has commenced, which would take place after discretionary permits for the project are approved.

Interconnection

CSC BS 14. What is the status of the Eversource System Impact Study referenced on page 7 of the petition?

The study for the first 4.99 MW of aggregate interconnection is completed. Eversource has tendered a generator interconnection agreement for the first 4.99 MW of aggregate interconnection. The Petitioner has not yet executed the interconnection agreements because there are still outstanding questions regarding certain terms of the interconnection agreement such as the costs for certain line upgrades and the applicability of contribution in aid of construction.

Public Safety

CSC BS 15. Would the solar plant have a protection system to shut the plant down in the event of a fault within the facility or isolate the facility during abnormal grid disturbances or during other power outage events?

There are a number of protection devices that will be installed for each facility. Internal to the system, there will be breakers installed in both the panelboards and the switchboards which will protect the system in the event of a fault. On the utility side, reclosers will be installed which will detect outages and prevent the solar facilities from delivering power during any outage (anti-islanding protection). In addition, the reclosers are capable of detecting abnormal grid conditions on the utility/system side and will open during any event that would potentially harm the solar facility or the grid.

CSC BS 16. Would the project comply with the National Electrical Code, the National Electrical Safety Code, the relevant provisions of the Connecticut State Building Code and any applicable National Fire Protection Association codes and standards?

The projects will comply with the National Electric Code (NEC), the National Electric Safety Code and the National Fire Protection Association codes and standards.

CSC BS 17. Page 6 of the petition references a 7.5 foot tall chain-link security fence that would surround the entire facility. Could there be a gap in the fence at the bottom to allow for wildlife migration?

It is possible to install a gap at the bottom of the fence for wildlife, however, such gap would need to be small enough so that a person or small child could not crawl underneath the fence. Such a fence, however, could cause a problem if Petitioner decides to graze sheep within the fence limits to maintain the ground cover because it would potentially allow coyotes or other predators to enter the fenced area.

CSC BS 18. Where is the nearest airport and/or airfield? Would glare from the solar arrays have any impact on air navigation? Has a glare analysis been conducted?

The nearest airport to the projects' site is a small privately owned farm airport known as the Valley Farms Airport. The airport runway is approximately 1.7 miles to the southeast of the proposed project.

A glare analysis of the solar projects has not been performed, however, Petitioner has reviewed the FAA's Interim Policy, FAA Review of Solar Energy System Projects on Federally Obligated Airports.[1] This policy establishes guidelines for constructing solar energy systems on airport property, which solar facilities would be held to a higher standard than off-site solar generation. The FAA has established a standard for measuring the ocular impact of any proposed solar energy system on a federally-obligated airport. Applicants must demonstrate that the proposed solar energy system meets the following standards: "(i) No potential for glint or glare in the existing or planned airport Traffic Control Tower (ATCT) cab, and (ii) No potential for glare or "low potential for after-image" (shown in green in Figure 1) along the final approach path for any existing landing threshold or future landing thresholds (including any planned interim phases of the landing thresholds) as shown on the current FAA-approved Airport Layout Plan (ALP). The final approach path is defined as two (2) miles from fifty (50) feet above the landing threshold using a standard three (3) degree glidepath."

[1] https://www.federalregister.gov/documents/2013/10/23/2013-24729/interim-policy-faa-review-of-solar-energy-system-projects-on-federally-obligated-airports

Although the proposed solar projects are within 2 miles of the Valley Farms Airport, it is not within the standard 3 degree glidepath. Included with this response is a map, attached as Exhibit "C", depicting the location of the airport with respect to the projects' location and the 3 degree glidepath from the end of the runway.

Environmental

CSC BS 19. Page 10 of the petition references the commencement of a Phase II Environmental Site Assessment (ESA) consistent with the recommendations of the completed Phase I ESA. What is the status of the Phase II ESA?

The Phase II ESA is still in progress, however, all of the recognized environmental conditions were isolated to the area around the house and barn located on the property. The proposed solar projects are not located in the area of any recognized environmental condition.

CSC BS 20. On page 14 of the petition and Sheet 7 of 14 of Exhibit A, both reference a 50-foot wetland buffer. Sheets 3 and 4 of 14 of Exhibit A reference a 100-foot wetland buffer. Please clarify.

The wetland buffers shown in the plan set provided as Exhibit A to the Petition depict 100 foot buffers. None of the facilities are being proposed within 100 feet of a wetland.

CSC BS 21. In Exhibit F of the petition, farm ponds were identified in the Wetland Report. Were these farm ponds determined to be or not to be vernal pools? If the farm ponds were determined to be vernal pools, what is the percent development in the 100-foot vernal pool envelope and the 750-foot critical terrestrial habitat?

Petitioner is not aware of any vernal pools in the farm ponds. The Natural Diversity Data Base search performed by DEEP (noted in their letter dated February 22, 2016) did not reveal the presence of any threatened or endangered species that would benefit from any vernal pools, so a specific vernal pool study was not performed.

It should also be noted that the farm pond to the north is located in the State of Massachusetts on an entirely separate parcel from the proposed projects' parcel. As such if it were a wetland or vernal pool then it would be subject to Massachusetts' jurisdiction.

CSC BS 22. What is the length of the posts and to what depth would the posts be driven into the ground to provide structural stability? Are any impacts to groundwater anticipated? If so, how would the petitioner manage and/or mitigate these impacts?

Petitioner will not know the exact embedment depth of the piers until (a) geotechnical or pull tests are performed and (b) the racking system is selected and purchased. The structural design, including the embedment depth, is based on a number of factors including the design of the racking system and the soil characteristics.

CSC BS 23. Are residences near the site served by private wells? Assuming some areas are served by private wells, can vibrations caused by the installation of the racking posts cause sediment buildup in adjacent wells? What measures will the petitioner undertake to ensure there is no effect on the wells?

The residences near the site are served by private wells. Petitioner has installed 17 solar projects throughout the country, many of which have been constructed in close proximity to homes with wells and we have never experienced an impact to the well water quality caused by the machinery used to install the piers. We do not plan to undertake any measures to ensure that there is no disruption or effect on private well water because

Petitioner is not aware of any evidence to support that this is a risk.There are, however, alternative foundation methods by which solar can be installed which does not use vibratory pier driving machines. Those methods include (a) a helical screw foundation, which consists of a large screw, typically 4-8" in diameter, attached to the end of a post which is then screwed into the ground and (b) a ballasted foundation which consists of an above surface foundation, typically a poured concrete footing, that rests on top of the ground. Ballasted foundations are typically used for sites that can't be penetrated like landfills.

Construction Questions

CSC BS 24. What is the anticipated sequence of construction? During what time of year would each sequence ideally occur? Does this account for possible seasonal construction restrictions due to the presence of protected species?

Construction of a solar project typically occurs in the following sequence, but in our experience this schedule can be shifted around significantly.

1. Site clearing
2. Erosion control measures installed
3. Site grading
4. Fence installation
5. Pier installation
6. Conduit and cable installation
7. Concrete pads poured
8. Racking installation
9. Module installation
10. Interconnection Upgrades (ongoing throughout construction phase)
11. Major equipment such as transformer, inverters and panelboards, switchboards and disconnect switches installed.
12. Site restoration/hydroseeding

Ideally the project would be constructed when there is no frost in the ground and the site would be cleared outside the pup season for the Northern long-eared bat.

CSC BS 25. Is the Stormwater Management and Hydrology Report in Exhibit I compliant with the *2004 Connecticut Stormwater Quality Manual*?

Yes.

CSC BS 26. Has the petitioner considered provisions to handle stormwater during/following an extreme rain event during construction? Are temporary swales and/or basins proposed?

Yes. The project layout has incorporated the requirements outlined by the 2004 Connecticut Stormwater Quality Manual for temporary stormwater management, however several of these temporary basins will remain permeant to reduce peak stormwater discharges from the site. The proposed permanent stormwater sediment basins associated with the project provide water quality treatment as well as reduce peak stormwater discharge rates from the site. The hydraulic discharge rates from the site for pre and post construction are outlined in the Hydrology report with the originally submitted application. Swales to convey stormwater to the basins will be installed throughout the project.

CSC BS 27. Would the stormwater design be installed in phases to control stormwater flows onto adjacent properties during construction?

Yes. All ground disturbance and grading during construction will be performed in five-acre increments.

Each five-acre increment will have a dedicated detention basin. The detention basin would be excavated, seeded and riprapped. Once the detention basin is blanketed or hydro-seeded, petitioner would then move on to the next five-acre increment. Petitioner does not propose to wait for the grass to grow in before moving on to the next five-acre increment since the blanket or hydro-seed would provide adequate stabilization.

Maintenance Questions

CSC BS 28. Would snow accumulation on the solar panels affect the output of the facility? Under what circumstances would snow be removed?

Snow cover on the solar panels would affect the output of each facility, however, this has been factored into the production forecast for each facility and is included in the soiling loss estimate. Since it's typically expensive to manually remove the snow from the modules, Petitioner does not have plans to remove the snow on a regular basis and would only do so in the event of heavy snow followed by a long stretch of cold weather.

CSC BS 29. Has any analysis been conducted to determine structural limits of snow accumulation on the solar panels and steel support structures, assuming heavy, wet snow and or ice? What accumulation of snow could the structures handle? Would the Petitioner clear snow from the panels when it approached the limit?

A structural design for the solar facility has not yet been prepared. The structural design, which will be prepared by a Connecticut licensed structural engineer, would factor in snow loads into the structural design. This is no different than the structural design for a residential, commercial or industrial building.

CSC BS 30. Would any mowing be required under or around the proposed solar panels/modules, and if so, approximately how often would mowing occur? Would the petitioner adhere to any seasonal restrictions on mowing due to the presence of state and/or federal protected species?

It is anticipated that the site would need to be mowed 4 to 5 times each year during the growing season in order to prevent overgrowth on the solar panels which could impact the energy production of the facilities. Petitioner cannot agree to any restrictions that would restrict controlling the vegetation growth if it has the possibility of impacting the energy production from the solar facilities. Moreover, any such restrictions would also prohibit the agricultural use of the property for sheep grazing.

CSC BS 31. Would the installed solar panels require regular cleaning or other, similar, maintenance? How would this be accomplished? Would any chemicals be used or only water? Would this maintenance activity have any impacts to water quality?

Cleaning of solar modules in the northeast part of the country is not standard practice. Mother nature typically provides sufficient precipitation to clean the modules on a regular basis. In the event of drought or excessive soiling, Petitioner may wash the modules using water.

CSC BS 32. Could the petitioner establish post-construction site restoration/revegetation that includes the incorporation of model pollinator habitat?

Petitioner is not proposing to incorporate any pollinator habitat vegetation in its restoration plan. Further, such a pollinator habitat may be inconsistent with other potential agricultural or other uses of the property when the project would be decommissioned.

Exhibit A

APPROVAL UNDER SUBDIVISION CONTROL LAW NOT REQUIRED. PLANNING BOARD, TOWN OF EAST LONGMEADOW, MASSACHUSETTS.

DATE: _____

FOR REGISTRY USE

MAP REFERENCES

1) "LAND IN EAST LONGMEADOW, MASS. & SOMERS, CONN. SURVEYED FOR WESTERN MASSACHUSETTS ELECTRIC COMPANY," SCALE 1"=300', DATED FEB. 22, 1971, BY GORDON E. AINSWORTH & ASSOCIATES, INC. REGISTERED LAND SURVEYORS & ENGINEERS DEERFIELD, MASS. SHEET AA–32306.

2) "SECTION II PLAN OF LOTS BILTON ROAD, SOMERS, CONN. ORCHARD HEIGHTS, EDWARD W. SUBJECK, OWNER," SCALE 1"=100', DATED MAY 1964 REVISED JUNE 1965, BY SMITH & WALLEN ENGINEERING COMPANY, INC. 602 WHITE STREET, SPRINGFIELD, MASS. SHEET 1 OF 3.

3) "LOT LINE RECONFIGURATION PLAN PREPARED FOR MARY GAMILIS, 4 BROW HILL ROAD, SOMERS, CONNECTICUT," SCALE 1"=40', DATED 04–17–15, BY WILLIAM R. PALMBERG & SON LLC LAND SURVEYORS 264 HAZARD AVENUE ENFIELD, CONNECTICUT.

4) "PROPERTY OF ROLAND A. & CAROLYN B. FERIOLI BILTON ROAD SOMERS, CONN," SCALE 1"=50', DATED MAY 1972, BY JAMES P. MURPHY REG. LAND SURVEYOR ENFIELD, CONN.

5) "PROPOSED TRANSMISSION LINE RIGHT OF WAY IN THE TOWN OF EAST LONGMEADOW, MASS. FOR WESTERN MASS ELECTRIC CO.," SCALE 1"=100', DATED DEC. 8/71, BY GORDON E. AINSWORTH & ASSOC. INC. SHEET 1 OF 2.

6) "PLAN SHOWING LAND TO BE CONVEYED TO ANNA B. GIUSTINA RESERVING RIGHT IF WAY IN THE TOWN OF EAST LONGMEADOW, MASSACHUSETTS," SCALE 1"=40', DATED 5–12–89, BY NORTHEAST UTILITIES SERVICE COMPANY SYSTEM REAL ESTATE DEPARTMENT.

7) "SUBDIVISION PLAN OWNER DONALD & ELLEN BUSHNELL 156 BILTON ROAD MAP:10 LOT: 3 ZONE: A–1 APPLICANT STEVEN BUSHNELL 121 WEYMOUTH ROAD, ENFIELD, CONNECTICUT," SCALE 1"=100', DATED 5–29–03, BY GARY B. LeCLAIR, LLC 55 GAYLORD ROAD, WINDSOR LOCKS, CONNECTICUT.

8) "PLAN OF LAND IN EAST LONGMEADOW, MASS & SOMERS, CONN.," SCALE 1"=150', DATED NOV. 15, 1971, BY WESTERN MASS ELECTRIC CO REAL ESTATE DEPARTMENT WEST SPRINGFIELD, MASS. SHEET AA–32736.

NOTES

1) NORTH ORIENTATION AND COORDINATES REFER TO CONNECTICUT GRID SYSTEM NAD 83.

2) TOTAL AREA = 3,208,479 SQ. FT., 73.656 ACRES.
CONNECTICUT PARCEL AREA =2,282,314 SQ. FT., 52.394 ACRES
MASSACHUSETTS PARCEL AREA = 926,165 SQ. FT., 21.262 ACRES

3) CONNECTICUT PARCEL IS ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN) PANEL 006D, MAP NUMBER 09011200006D, EFFECTIVE DATE AUGUST 16, 2006; MASSACHUSETTS PARCEL IS IN ZONE X (AREAS DETERMINED TO BE OUTSIDE THE 0.2% CHANCE FLOODPLAIN) PANEL 417E, MAP NUMBER 25013C0417E, EFFECTIVE DATE JULY 16, 2013

4) CONNECTICUT PARCEL IS IN THE A–1 ZONE ON THE 2004 SOMERS, CT. ZONING MAP. MASSACHUSETTS PARCEL IS IN THE RESIDENTIAL AA ZONE ON THE 2007 EAST LONGMEADOW, MA. ZONING MAP.

5) PORTION OF PROPERTY, AS SHOWN ON SURVEY, IN EAST LONGMEADOW, MASSACHUSETTS IS SUBJECT TO A RIGHT OF WAY EASEMENT IN FAVOR OF WESTERN MASSACHUSETTS ELECTRIC COMPANY GRANTED BY MERL I. BILTON AND GLADYS M. BILTON AS RECORDED IN BOOK 3655 PAGE 315 OF THE HAMPDEN REGISTRY OF DEEDS.

6) SIGNIFICANT DISCREPANCIES WERE FOUND BETWEEN MONUMENTATION ALONG HILL PASTURE ROAD AND OTHER MONUMENTATION AND EVIDENCE RELATED TO THE MAPPING FOR ORCHARD HEIGHTS SECTION II.(MAP REFERENCE #2). MATHEMATICAL ERRORS EXIST ON SAID MAP. THE GEOMETRY OF THE EXTERIOR OF THE SUBDIVISION WAS USED AND ROTATED TO CORRESPONDING FIELD EVIDENCE.

7) HOUSE, GARAGE AND SHED EXIST ON THE SURVEYED PROPERTY. SEE DETAIL A FOR BUILDING DIMENSIONS.

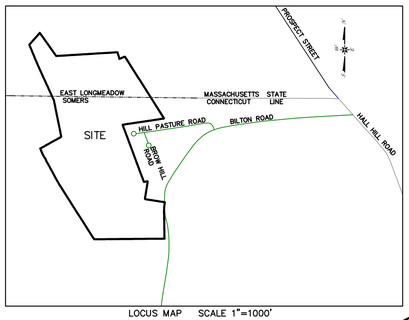
8) SUBSTANTIAL FEATURES SUCH AS DRIVEWAYS, FENCING ARE SHOWN ON SURVEY.

9) OVERHEAD UTILITY WIRES ARE PRESENT ON THE SITE.

10) WETLAND FLAGS DEPICTED ON THE SURVEY WERE FIELD LOCATED.

11) NO APPARENT WASTE DUMP OR LANDFILL OBSERVED.

12) FOOTPATHS WERE OBSERVED CROSSING A PORTION OF THE PROPERTY MOSTLY WITHIN THE WESTERN MASSACHUSETTS ELECTRIC COMPANY EASEMENT AREA. THEY ARE OF VARYING WIDTHS.



LOCUS MAP SCALE 1"=1000'

10/02/
N/F
STATE OF CONNECTICUT
VOL. 13 P. 588

264 BILTON ROAD

N25°26'22"W 22.01'
N30°29'25"W 73.03'
N27°51'46"W 138.45'
N29°17'39"W 122.40'
N26°21'42"W 21.50'
N22°05'17"W 81.53'
MON (FD)
N29°02'01"W 59.98'
N19°40'15"W 23.01'
N40°29'28"W 20.21'
N60°58'15"E 335.69'
MON (FD)
DISTURBED MON (FD)
N11°23'45"W 521.64' 514.03'
N24°36'31"W 540.43'
N32°27'27"W 915.16'

22/5/0
N/F
WESTERN MASSACHUSETTS ELECTRIC COMPANY
BOOK 3731 P. 484

22/4/0
N/F
WESTERN MASSACHUSETTS ELECTRIC COMPANY
BOOK 3731 P. 484

32/42/0
N/F
REDSTONE FARMS & BARNS, LLC
BOOK 14751 P. 395

N22°39'06"W 307.60'
N41°24'30"E 221.73'
STONE PILE (FD)
PATH
MON (FD)
IP (FD)
EASEMENT IN FAVOR OF WESTERN MASSACHUSETTS ELECTRIC COMPANY BOOK 3655 PAGE 315
S35°20'22"E 396.46'
HO
300.00'
100'
BAR IN STUMP (FD)
MON (FD)
IP (FD)

963.82'
S89°27'43"E
7.62'
MON (FD)

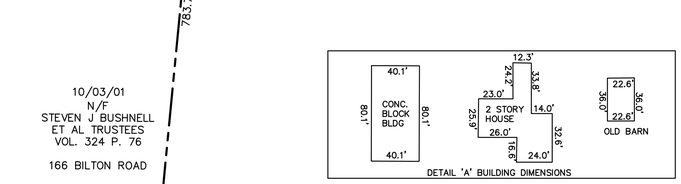
WF#101/108 WF#107 WF#108 WF#106 WF#105 WF#102 WF#103 WF#104

33/1/0
N/F
HEIRS OF MERL I BILTON
C/O REBECCA S. RICHARDS
BOOK 2775 P. 142

REAR PEASE ROAD

STATE LINE SOMERS, CONNECTICUT
EAST LONGMEADOW MASSACHUSETTS

N86°27'54"E 857.90'



DETAIL 'A' BUILDING DIMENSIONS

10/03/01
N/F
STEVEN J BUSHNELL ET AL TRUSTEES
VOL. 324 P. 76

166 BILTON ROAD

S89°29'42"W 783.73'

10/06/
N/F
REBECCA S. RICHARDS ET AL
VOL. 329 P. 71

134 BILTON ROAD

10/03A/
N/F
STEVEN J BUSHNELL ET AL TRUSTEES
VOL. 324 P. 76

156 BILTON ROAD

MON (FD)
S89°35'21"W 199.73'
CL&P 1163
CL&P 1164
OH
BILTON ROAD
ASSUMED STREETLINE S0°53'15"E 376.06'
52.8'
CONC. BLOCK BUILDING
BIT DRIVE
CL&P 1162
HOUSE
OLD BARN
33.0'
283.00'
S80°59'52"E
24.1'
CL&P 1161
CL&P 1160
23.9'±
ASSUMED STREETLINE
Δ = 111°32'32"
R = 682.29'
T = 66.95'
L = 133.48'

S9°23'48"W 253.96'
26" HICKORY
28" OAK
S20°25'55"E 853.11'
WOODEN POSTS
CLF
36" PINE W/WIRE
30" MAPLE W/WIRE
S81°27'39"W
N78°39'17"E 255.69'

10/06/01
N/F
ROLAND A. FERIOLI
CAROLYN BILTON FERIOLI
VOL. 66 P. 170

120 BILTON ROAD

43/06/19
N/F
ESTATE OF WILLIAM STEWART & BRADFORD BILTON STEWART
VOL. 278 P. 1000

12 BROW HILL ROAD

43/07/18
N/F
ALEXIS C. CHRETIEN
VOL. 332 P. 69

4 BROW HILL ROAD

OTHER LAND OF 4 BROW HILL ROAD

43/09/16
N/F
J. MARCUS DORAN
KIMBERLY A. DORAN
VOL. 176 P. 76

44 HILL PASTURE ROAD

43/10/15
N/F
THERESA CHODKOWSKI
VOL. 202 P. 163

36 HILL PASTURE ROAD

43/11/14
N/F
DANA P. STEELE
CARRIE L. STEELE
VOL.306 P. 1063

30 HILL PASTURE ROAD

BROW HILL ROAD
HILL PASTURE ROAD
IP (FD)
MON (FD)
IP (HELD)

GRAPHIC SCALE
120 0 60 120 240 480
(IN FEET)
1 inch = 120 ft.

SYMBOLS LEGEND

		M/B/L Map/Block/Lot
O	Iron Pin	Deciduous Tree
□	Monument	Coniferous Tree
○	Wooden Post	Stone Wall
◇	Utility Post	—x— Chain Link Fence
□	'CL' CB	Property Line
■	'C' CB	Easement Line
—OH—	Overhead Utility	Stone Pile
△	Wetlands Flag	

WF#1 WF#2 WF#3 WF#4 WF#5 WF#6 WF#7 WF#8 WF#9 WF#10 WF#11 WF#12 WF#13 WF#14 WF#15 WF#16 WF#17 WF#18 WF#19 WF#20 WF#21 WF#22 WF#23 WF#24 WF#25 WF#26 WF#27 WF#28 WF#29 WF#30 WF#31 WF#32 WF#33/40 WF#34 WF#35 WF#36 WF#37 WF#38 WF#39

I HEARBY CERTIFY THAT THE PROPERTY LINES SHOWN ON THIS PLAN ARE THE LINES DIVIDING EXISTING OWNERSHIP AND THE LINES OF THE STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREET OR WAYS ALREADY ESTABLISHED, AND THAT NO NEW LINES FOR DIVISION OF EXISTING OWNERSHIP OR OF NEW WAYS ARE SHOWN.

ALAN S. FENROW #51928 DATE

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN CONFORMITY WITH THE RULES AND REGULATIONS OF THE REGISTERS OF DEEDS OF THE COMMONWEALTH OF MASSACHUSETTS.

ALAN S. FENROW #51928 DATE

EASEMENT IN FAVOR OF WESTERN MASSACHUSETTS ELECTRIC COMPANY BOOK 3655 PAGE 315

PINCH PIPE IN STONE PILE (FD)
STONE PILE (FD)
S16°42'27"E 97.17'
N66°50'09"E 82.56'
IP IN STONE PILE (FD)
2,052'± TO PROSPECT STREET

746.87'
1024.34'
426.81'
S89°26'57"E
277.47'
S32°20'15"E
WF#41 WF#42 WF#43 WF#45 WF#46 WF#47
43/18A/
N/F
ROCKY RIVER REALTY

33/2/0
N/F
WESTERN MASSACHUSETTS ELECTRIC COMPANY
BOOK 3784 P. 283

I HEREBY CERTIFY TO PLH LLC, THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT WAS BASED WERE MADE IN ACCORDANCE WITH THE 2011 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 2, 3, 4, 6(A), 7(A), 8, 11(A), 11(B), 13, 18, 19, 20(A) AND 21 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON DECEMBER 8, 2015.

DATE OF PLAT OR MAP: DECEMBER 10, 2015.

A. RAFAEL MARTINEZ CONNECTICUT LICENSED LAND SURVEYOR #18833

ALAN S. FENROW MASSACHUSETTS REGISTERED LAND SURVEYOR #51928

134 BILTON ROAD–SURVEY DESCRIPTION–CONNECTICUT PORTION

BEGINNING AT A POINT ON THE WESTERLY LINE OF BILTON ROAD. SAID POINT BEING THE NORTHEAST CORNER OF 156 BILTON ROAD MARKED BY A MONUMENT FOUND. THENCE RUNNING ALONG LAND OF STEVEN J. BUSHNELL ET AL TRUSTEES, S89°35'21"W A DISTANCE OF 199.73' TO A POINT, THENCE RUNNING ALONG LAND OF STEVEN J. BUSHNELL ET AL TRUSTEES, S89°29'42"W A DISTANCE OF 783.73' TO A POINT IN THE EASTERLY BOUNDARY OF LAND OF THE STATE OF CONNECTICUT. THENCE RUNNING N32°27'27"W A DISTANCE OF 915.16' TO A POINT. THENCE RUNNING N25°26'22"W A DISTANCE OF 22.01' TO A POINT. THENCE RUNNING N30°29'25"W A DISTANCE OF 73.03' TO A POINT. THENCE RUNNING N27°51'46"W A DISTANCE OF 138.45' TO A POINT. THENCE RUNNING N29°17'39"W A DISTANCE OF 122.40' TO A POINT. THENCE RUNNING N26°21'42"W A DISTANCE OF 21.50' TO A POINT. THENCE RUNNING N19°40'15"W A DISTANCE OF 23.01' TO A POINT. THENCE RUNNING N40°29'28"W A DISTANCE OF 20.21' TO A POINT. THENCE RUNNING N29°02'01"W A DISTANCE OF 59.98' TO A POINT. THENCE RUNNING N22°05'17"W A DISTANCE OF 81.53' TO A POINT. THENCE RUNNING N60°58'15"E A DISTANCE OF 335.69' TO A POINT. THENCE RUNNING N11°23'45"W A DISTANCE OF 514.03' TO A POINT ON THE CONNECTICUT–MASSACHUSETTS STATE LINE. THE LAST TWELVE COURSES BEING ALONG THE EASTERLY LINE OF LAND OF THE STATE OF CONNECTICUT. THENCE RUNNING ALONG THE CONNECTICUT–MASSACHUSETTS STATE LINE S89°27'43"E A DISTANCE OF 963.82' TO A POINT. THENCE RUNNING ALONG THE CONNECTICUT–MASSACHUSETTS STATE LINE S89°26'57"E A DISTANCE OF 426.81' TO THE WESTERLY LINE OF LAND OF ROCKY RIVER REALTY. THENCE RUNNING ALONG LAND OF ROCKY RIVER REALTY S32°20'15"E A DISTANCE OF 277.47' TO A POINT. THENCE RUNNING S81°27'39"W ALONG LAND PARTLY BY EACH DANA P. & CARRIE L. STEELE, THERESA CHODKOWSKI, J. MARCUS & KIMBERLY A. DORAN AND OTHER LAND OF 4 BROW HILL ROAD A DISTANCE OF 586.86' TO A POINT. THENCE RUNNING S20°25'55"E ALONG LAND PARTLY BY EACH OTHER LAND OF 4 BROW HILL ROAD, ALEXIS C. CHRETIEN AND ESTATE OF WILLIAM STEWART & BRADFORD BILTON STEWART A DISTANCE OF 853.11' TO A POINT. THENCE RUNNING N78°39'17"E ALONG LAND OF ESTATE OF WILLIAM STEWART & BRADFORD BILTON STEWART A DISTANCE OF 55.62' TO A POINT IN THE WESTERLY LINE OF LAND OF ROLAND A. & CAROLYN BILTON FERIOLI. THENCE RUNNING S9°23'48"W ALONG LAND OF ROLAND A. & CAROLYN BILTON FERIOLI A DISTANCE OF 253.96' TO A POINT. THENCE RUNNING S80°59'52"E ALONG LAND OF ROLAND A. & CAROLYN BILTON S80°59'52E A DISTANCE OF 283.00' TO A POINT IN THE WESTERLY STREETLINE OF BILTON ROAD. THENCE RUNNING SOUTHERLY ALONG THE WESTERLY STREETLINE OF BILTON ROAD ON A CURVE TO THE LEFT WITH A RADIUS OF 682.29' AND LENGTH OF 133.48' TO A POINT. THENCE RUNNING S0°53'15"E ALONG THE WESTERLY STREETLINE OF BILTON ROAD A DISTANCE OF 376.06' TO THE POINT AND PLACE OF BEGINNING.

REAR PEASE ROAD–SURVEY DESCRIPTION–MASSACHUSETTS PORTION

BEGINNING AT A POINT AT THE NORTHWESTERLY CORNER OF LAND OF ROCKY RIVER REALTY. SAID POINT BEING ON THE CONNECTICUT–MASSACHUSETTS STATE LINE. THENCE RUNNING N89°26'57"W ALONG THE CONNECTICUT–MASSACHUSETTS STATE LINE A DISTANCE 426.81' TO A POINT. THENCE RUNNING N89°27'43"W ALONG THE CONNECTICUT–MASSACHUSETTS STATE LINE A DISTANCE OF 963.82' TO A POINT IN THE EASTERLY LINE OF LAND OF WESTERN MASSACHUSETTS ELECTRIC COMPANY. THENCE RUNNING N11°23'45"W A DISTANCE OF 7.62' TO A POINT. THENCE RUNNING N24°36'31"W A DISTANCE OF 540.43' TO A POINT. THENCE RUNNING N22°39'06"W A DISTANCE OF 307.60' TO A POINT. THE LAST THREE COURSES BEING ALONG THE EASTERLY LINE OF LAND OF WESTERN MASSACHUSETTS ELECTRIC COMPANY. THENCE RUNNING N41°24'30"E ALONG LAND OF REDSTONE FARMS & BARNS, LLC. A DISTANCE OF 221.73' TO A POINT. THENCE RUNNING S35°20'22"E A DISTANCE OF 396.46' TO A POINT, THENCE RUNNING N86°27'54"E A DISTANCE OF 857.90' TO A POINT, THENCE RUNNING S16°42'27"E A DISTANCE OF 97.17' TO A POINT, THENCE RUNNING N66°50'09"E A DISTANCE OF 82.56' TO A POINT, THE LAST FOUR COURSES ALONG LAND OF WESTERN MASSACHUSETTS ELECTRIC COMPANY, THENCE RUNNING ALONG LAND OF WESTERN MASSACHUSETTS ELECTRIC COMPANY S32°20'15"E A DISTANCE OF 746.87' TO THE POINT AND PLACE OF BEGINNING.

REAR PEASE ROAD–SUBJECT PARCEL–CURRENT DESCRIPTION

A CERTAIN PARCEL OF LAND SITUATED IN THE SOUTHERLY PART OF THE TOWN OF EAST LONGMEADOW IN THE COUNTY OF HAMPDEN, COMMONWEALTH OF MASSACHUSETTS, AND BOUNDED AND DESCRIBED AS FOLLOWS:

SOUTH ON THE STATE LINE BETWEEN THE STATES OF MASSACHUSETTS AND CONNECTICUT; WEST AND NORTH ON LAND, NOW OR FORMERLY, OF THE ENFIELD SHAKERS; EAST ON LAND NOW OF FORMERLY, OF SAID SHAKERS AND LAND, NOW OR FORMERLY, OF CHARLES HALL.

ALSO ANOTHER PARCEL OF LAND SITUATED IN THE SOUTHEASTERLY PART OF SAID EAST LONGMEADOW AND BOUNDED AND DESCRIBED AS FOLLOWS:

SOUTH ON THE STATE LINE; WEST ON LAND, NOW OR FORMERLY, OF SAID SHAKERS;NORTH ON LAND, NOW OR FORMERLY, OF CHARLES HALL; EAST ON LAND, NOW OR FORMERLY, OF WILLIAM HALL.

BOTH PARCELS CONTAINING ABOUT FIFTEEN ACRES OF LAND.

134 BILTON ROAD–SUBJECT PARCEL–CURRENT DESCRIPTION

FIRST PIECE: BEING ALL THE PREMISES CONVEYED BY VIOLET M. WILEY, AZALIA E. BILTON, ALBERT E. BILTON, HAZEL JONES, OLIVE L. TYRREL AND MYRTLE B. HART TO MERL I. BILTON DATED JUNE 5, 1946 AND RECORDED IN SOMERS LAND RECORDS VOL. 15 PAGE 557, AND BY DEED OF MARY E. BILTON AND LEW W. BILTON TO MERL I. BILTON DATED MARCH 7, 1940, AND RECORDED IN SOMERS LAND RECORDS, VOL. 21 PAGE 10, EXCEPTING THEREFROM THE PARCELS EXCLUDED BELOW.

SECOND PIECE: BEING ALL OF THE PREMISES CONVEYED BY LIZZIE J. POOLEY, HAROLD A. POOLEY AND GLADYS E. POOLEY, TO MERL IVAN BILTON DATED AUGUST 23, 1924 AND RECORDED IN SOMERS LAND RECORDS, VOLUME 14 PAGE 138. EXCEPTING THEREFROM THE PARCEL EXCLUDED BELOW. (REF. QUIT CLAIM DEED FROM CAROLYN M. BILTON TO MERL I. BILTON AND GLADYS M. BILTON, DATED OCTOBER 25, 1960 AND RECORDED IN VOLUME 33 PAGE 597 OF THE SOMERS LAND RECORDS.)

EXCLUDED THEREFROM THE FOLLOWING PARCELS:

FIRST PARCEL: BEING ALL THE PREMISES CONVEYED BY MERL IVAN BILTON AND GLADYS MARION BILTON TO MURIEL BILTON STEWART DATED AUGUST 9, 1966 AND RECORDED IN VOLUME 51 PAGE 392 OF THE SOMERS LAND RECORDS.

SECOND PARCEL: BEING ALL THE PREMISES CONVEY BY MERL I. BILTON AND GLADYS M. BILTON TO ROLAND A. FERIOLI AND CARLYN BILTON FERIOLI DATED MAY 20, 1972 AND RECORDED IN VOLUME 66 PAGE 170 OF THE SOMERS LAND RECORDS.

THIRD PARCEL: BEING ALL THE PREMISES CONVEYED BY MERL IVAN BILTON AND GLADYS MARION BILTON TO ANDREW SCHNEIDER AND ALBERTA BILTON SCHNEIDER DATED MAY 20, 1972 AND RECORDED IN VOL. 66 PAGE 168 OF THE SOMERS LAND RECORDS.

FOURTH PARCEL: BEING ALL THE PREMISES CONVEYED TO MERL I. BILTON AND GLADYS I. BILTON TO REBECCA B. SCHNEIDER DATED JULY 17, 1978 AND RECORDED IN VOLUME 87 PAGE 877 OF THE SOMERS LAND RECORDS. (REF. ALSO VOL. 811 PAGE 455.)

MCA
MARTINEZ COUCH & ASSOCIATES
ENGINEERING • LAND SURVEYING • ENVIRONMENTAL
CONSTRUCTION INSPECTION • GIS • WASTEWATER

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134 BILTON ROAD, SOMERS, CT
REAR PEASE ROAD, EAST LONGMEADOW, MA

PREPARED FOR
ECOS ENERGY
222 SOUTH 9TH STREET, STE 1600
MINNEAPOLIS, MN

THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH SECTIONS 20–300B–1 THRU 20–300B–20 OF THE REGULATIONS OF CONNECTICUT STATE AGENCIES – "MINIMUM STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" AS ENDORSED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. ON SEPT. 26, 1996. IT IS A FIRST SURVEY CONFORMING TO HORIZONTAL ACCURACY CLASS A–2 AND IS INTENDED TO BE USED FOR THE PURPOSE OF SHOWING EXISTING CONDITIONS AND PROPERTY LINE INFORMATION. TO BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON.

A. RAFAEL MARTINEZ LICENSED LAND SURVEYOR DATE

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL

A. RAFAEL MARTINEZ LLS

NO.	DATE	REVISIONS	BY	CHK	APPV
△					
△					
△					
△					
△					

DRAWN BY: ASF | CHECKED BY: JBR | SCALE: 1"=120' | DATE: 12/10/15

THIS MAP IS NOT VALID WITHOUT A LIVE SIGNATURE AND SEAL

ALAN S. FENROW LLS

ALTA/ACSM LAND TITLE SURVEY

JOB NO.	DRAWING NUMBER	SHEET
35–355	35–355.DWG	1 OF 1

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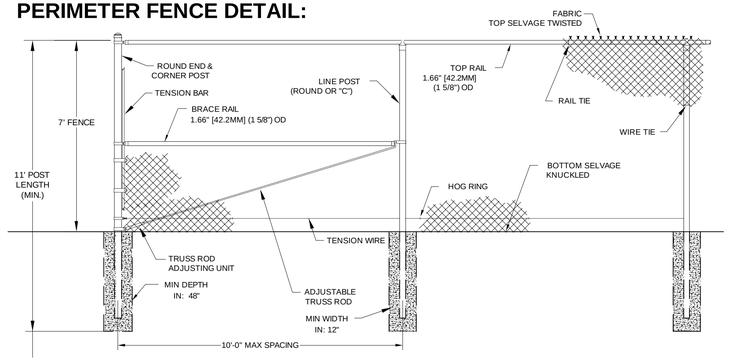
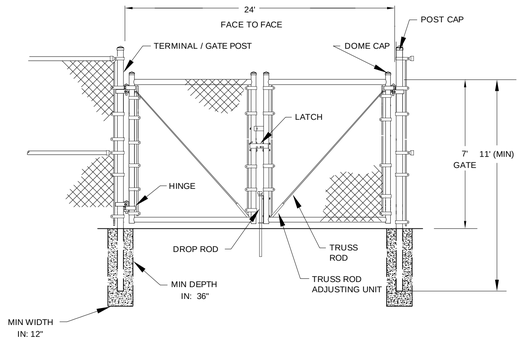
PERIMETER FENCE DETAIL:





PROJECT AREAS & IMPACTS:

TOTAL SITE AREA = 64.7 ACRES PROJECT (9.0 ACRES DEDICATED)
43.3 ACRES IN THE STATE OF CONNECTICUT
21.3 ACRES IN THE STATE OF MASSACHUSETTS

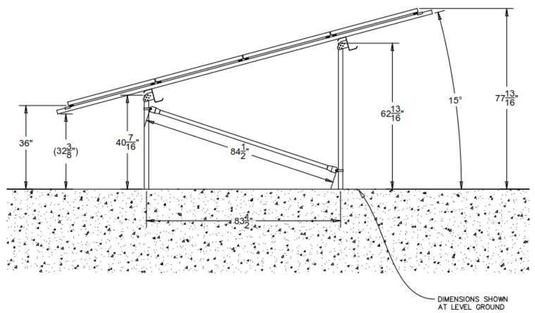
ARRAY FOOTPRINT= 35.0 ACRES (FULL PROJECT FENCE LINE LIMITS)

PROPOSED IMPERVIOUS:
GRAVEL ACCESS ROAD, STRUCTURAL POSTS & EQUIPMENT PADS = 0.98 ACRES

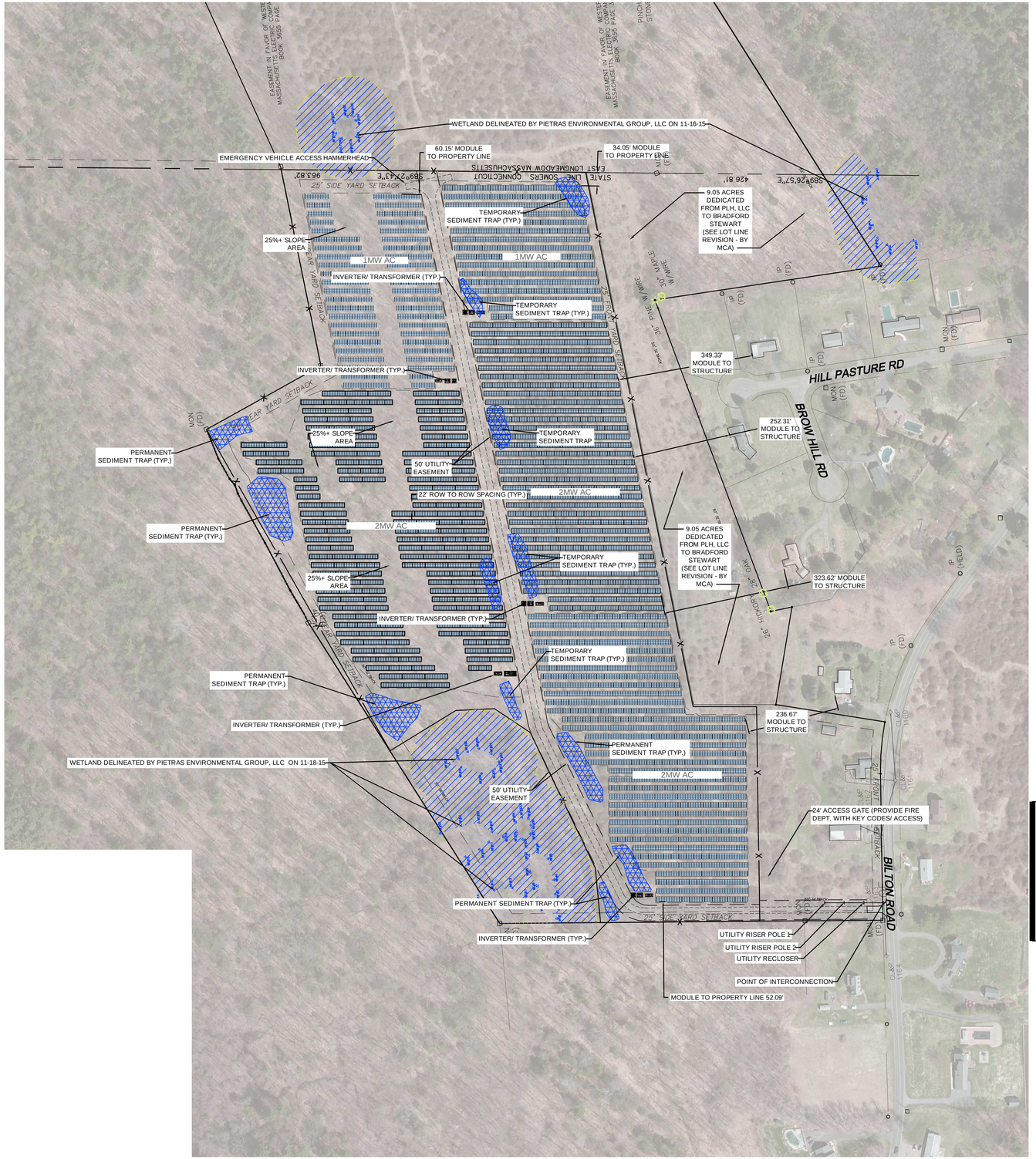
LEGEND:

- EXISTING PROPERTY LINE
- x PROPOSED PROJECT FENCE
- PROPOSED GRAVEL ACCESS ROAD
- M/V PROPOSED AC DISTRIBUTION
- 18 x 2 SOLAR MODULE BOCK
- 100' WETLAND BUFFER AREA
- WETLAND DELINEATION LINE

RACKING PROFILE DETAIL:



AERIAL SITE PLAN:



Westwood

Phone (480) 747-6558 6909 East Greenway Parkway, Suite 250
Fax (480) 376-8025 Scottsdale, AZ 85254
westwoodps.com

Westwood Professional Services, Inc.

STATE OF CONNECTICUT
AUGUST D. CHRISTENSEN
0030699
REGISTERED PROFESSIONAL ENGINEER
8-23-17

Designed: BTB
Checked: ADC
Drawn: JLB
Record Drawing by/date:

Revisions:

#	DATE	DESCRIPTION
-	8/23/2017	CT SITING BOARD SUBMISSION

Prepared for:

ecos ENERGY
222 SOUTH 9TH STREET
SUITE 1600
MINNEAPOLIS, MN 55402

0' 150' 300' 450'

BILTON ROAD SOLAR

134 BILTON RD
SOMERS, CT 06071
TOLLAND COUNTY

OVERALL SITE PLAN

SITING BOARD REVIEW

DATE: 08/23/17
SHEET: 3 of 14

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CORE FOREST PHOTOS:

PROJECT AREAS & IMPACTS:

TOTAL SITE AREA = 64.7 ACRES PROJECT (9.0 ACRES DEDICATED)
43.3 ACRES IN THE STATE OF CONNECTICUT
21.3 ACRES IN THE STATE OF MASSACHUSETTS
ARRAY FOOTPRINT= 27.3 ACRES (FULL PROJECT FENCE LINE LIMITS)

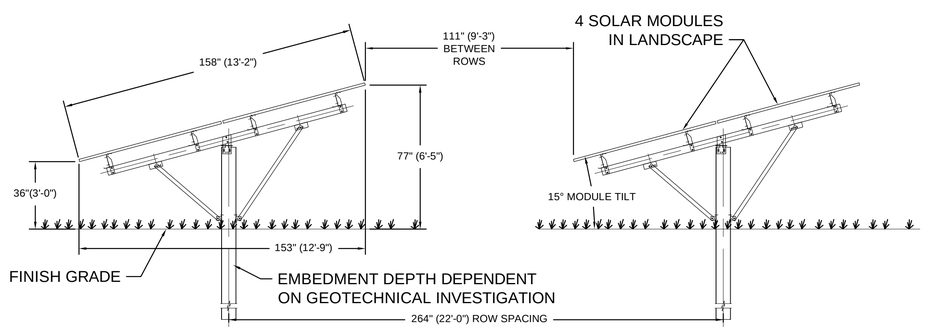
PROJECT CLEARING =
- SMALL CORE FOREST (<250 AC) = 6.0 AC
- SMALL CORE FOREST (<250 AC) IMPACT = 0.0 AC
- EDGE CORE = 15.3 AC
- EDGE CORE IMPACT = 7.5 AC

PROPOSED IMPERVIOUS:
GRAVEL ACCESS ROAD, STRUCTURAL POSTS & EQUIPMENT PADS = 0.98 ACRES

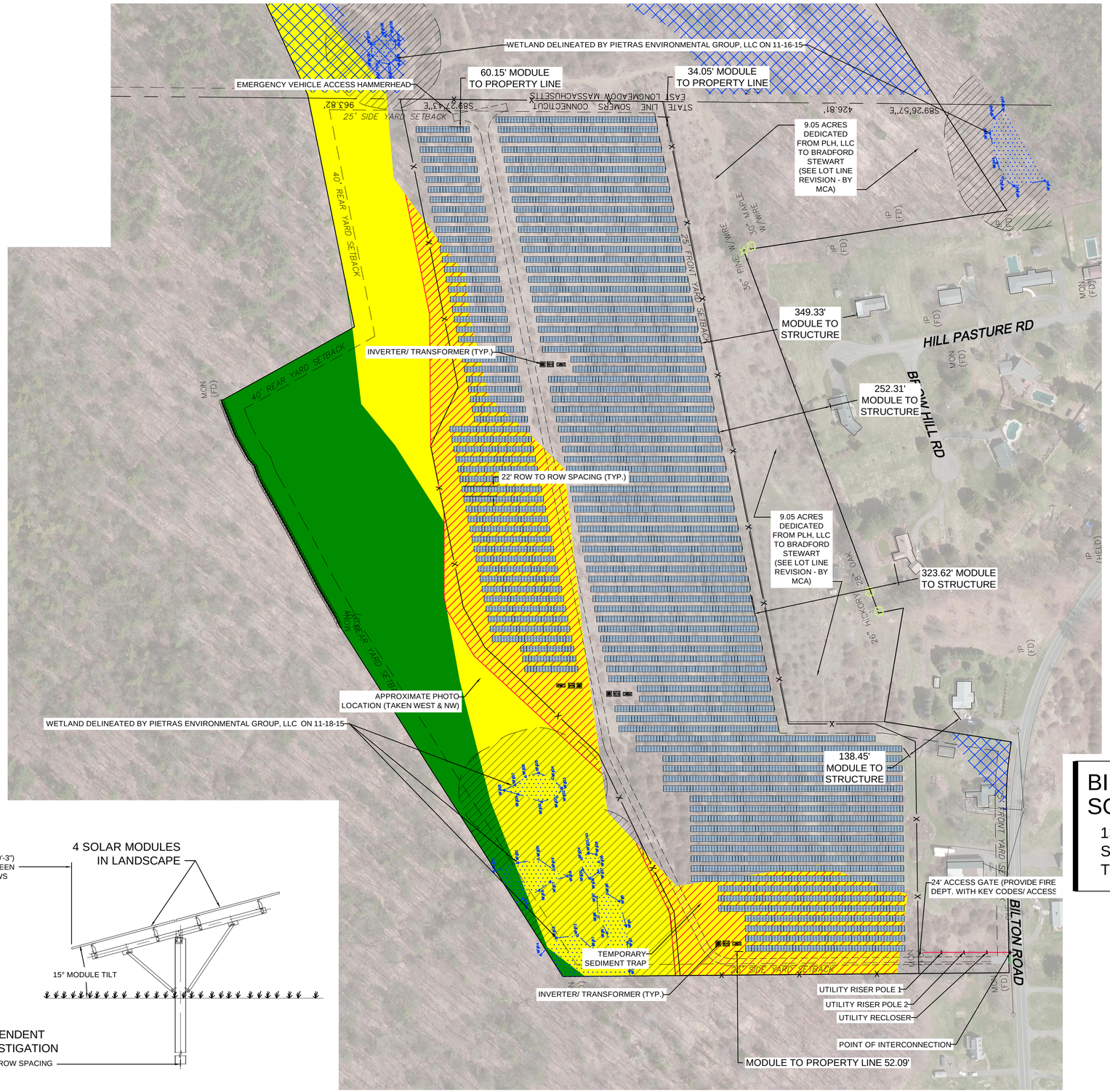
LEGEND:

- EXISTING PROPERTY LINE
- PROPOSED PROJECT FENCE
- PROPOSED GRAVEL ACCESS ROAD
- PROPOSED AC DISTRIBUTION
- 9 x 4 SOLAR MODULE BOCK
- 100' WETLAND BUFFER AREA
- WETLAND DELINEATION LINE

RACKING PROFILE DETAIL:



AERIAL SITE PLAN:



0' 120' 240' 360'

BILTON ROAD SOLAR

134 BILTON RD
SOMERS, CT 06071
TOLLAND COUNTY

OVERALL SITE PLAN

SITING BOARD REVIEW

DATE: 02/10/17
SHEET: 3 of 14

Exhibit B

Westwood

Phone (480) 747-6558 6909 East Greenway Parkway, Suite 250
Fax (480) 376-8025 Scottsdale, AZ 85254
westwoodps.com

Westwood Professional Services, Inc.

Designed: ADC
Checked: SAW
Drawn: SJB
Record Drawing by/date:

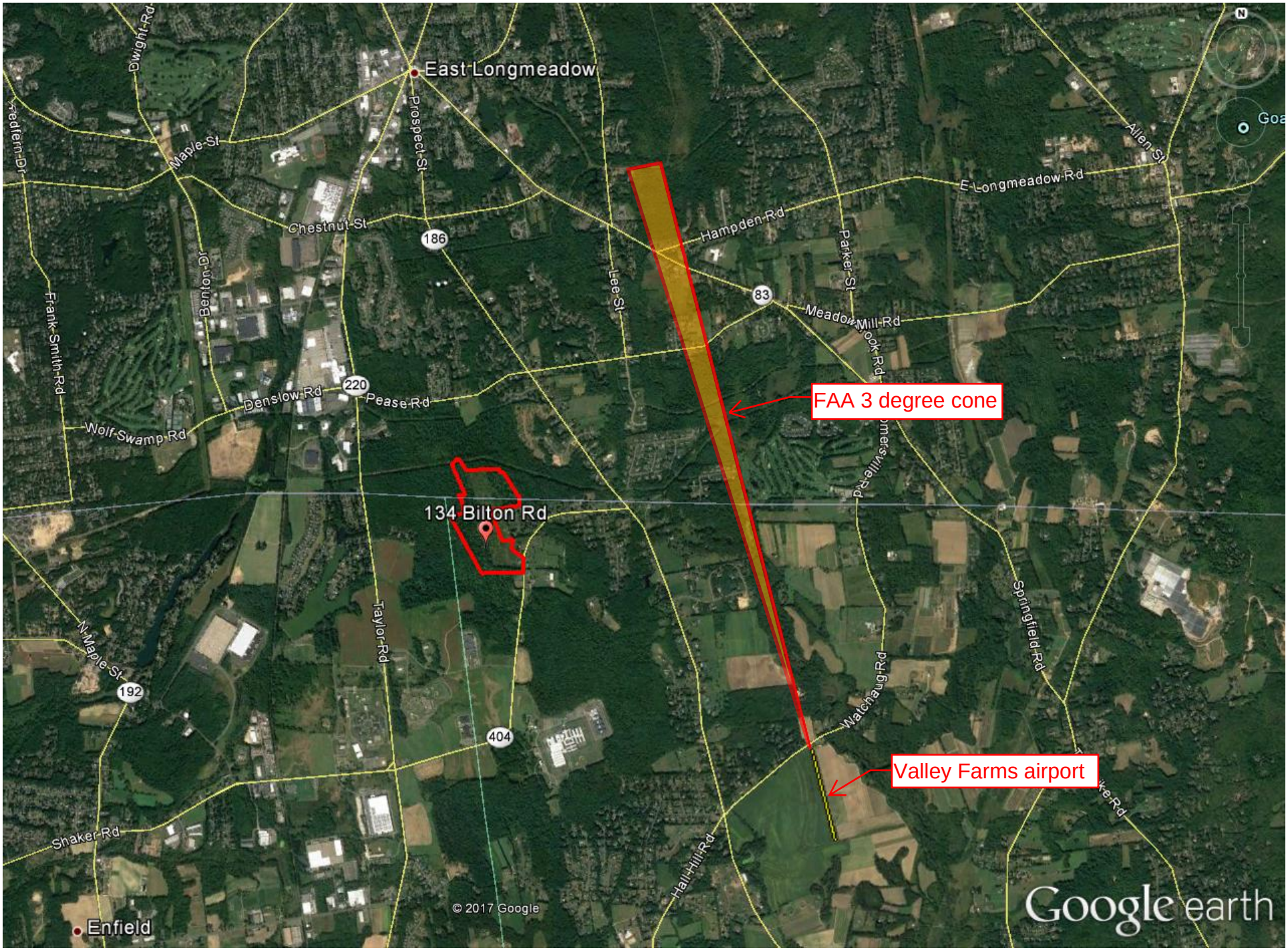
Revisions:

#	DATE	DESCRIPTION
-	6/20/2017	CT SITING BOARD SUBMISSION
	11/28/2017	CORE FOREST FOOTPRINT REVISION

Prepared for:

ecos ENERGY
222 SOUTH 9TH STREET
SUITE 1600
MINNEAPOLIS, MN 55402

Exhibit C


East Longmeadow
Dwight Rd
Maple St
Prospect St
Chestnut St
186
Hampden Rd
E Longmeadow Rd
Allen St
Parker St
83
Meadow Mill Rd
Lee St
Benton Dr
Frank Smith Rd
Denslow Rd
220
Pease Rd
Wolf Swamp Rd
FAA 3 degree cone
134 Bilton Rd
Somersville Rd
Springfield Rd
Watchaug Rd
Taylor Rd
N Maple St
192
404
Shaker Rd
Hall Hill Rd
Valley Farms airport
Enfield
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