

<p>PETITION NO. 1443A - SR North Stonington, LLC petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation of a 9.9-megawatt AC solar photovoltaic electric generating facility on five parcels located north and south of Providence New London Turnpike (State Route 184), west of Boombridge Road and north of Interstate 95 in North Stonington, Connecticut, and associated electrical interconnection.</p> <p>Reopening of this petition based on changed conditions pursuant to Connecticut General Statutes §4-181a(b).</p>	<p>} Connecticut</p> <p>} Siting</p> <p>} Council</p>	<p>May 12, 2022</p>
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Findings of Fact

Introduction

1. On February 25, 2021, SR North Stonington, LLC (SRNS or Petitioner) submitted a petition (Petition) to the Connecticut Siting Council (Council), pursuant to Connecticut General Statutes (CGS) §16-50k and §4-176, for a declaratory ruling for the construction, maintenance, and operation of a 9.9-megawatt AC solar photovoltaic electric generating facility located on five parcels located north and south of Providence New London Turnpike (State Route 184), west of Boombridge Road and north of Interstate 95 (I-95) in North Stonington, Connecticut, and associated electrical interconnection. (Petition 1443) (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #1)
2. SRNS is a Delaware limited liability company with an office in Nashville, Tennessee. SRNS is a wholly owned subsidiary of Silicon Ranch Corporation (SRC). SRC is a developer and operator of solar energy facilities in the United States. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #3)
3. The parties to the original Petition 1443 proceeding were SRNS and the Town of North Stonington (Town). (Transcript 1 – February 15, 2022, 2:00 p.m. [Tr. 1], p. 6; Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #2)
4. The proposed project would be a “grid-side distributed resources” facility under CGS § 16-1(a)(37). (CGS § 16-1(a)(37); Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #5)
5. The proposed project would generate renewable electrical energy from solar power. Solar power is considered a Class I renewable energy source. (CGS §16-1(a)(20); Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #6)
6. The State legislature established a renewable energy policy under CGS §16a-35k that encourages the development of renewable energy facilities to the maximum extent possible. (CGS §16a-35k)
7. During the proceedings held on Petition 1443, as a result of comments from abutters and the Town, SRNS revised its Original Project (hereinafter referred to as the Revised Project) including, but not limited to, the following changes:
 - a) Reduction in the limits of disturbance and tree clearing areas;
 - b) Reduction in site grading;
 - c) Increased setbacks from wetlands and watercourses; and
 - d) Reduction in the quantity of solar panels for the arrays located north of Route 184. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #35)

8. At a public meeting held on September 9, 2021, the Council did not issue a declaratory ruling for the proposed Revised Project. Due to a tie vote, the motion to approve the Findings of Fact, Opinion, and Decision and Order failed; therefore, a declaratory ruling was not issued. (Council Administrative Notice Item No. 34 – Petition 1443, Decision)
9. On December 1, 2021, SRNS submitted a Motion to Reopen and Modify (Motion to Reopen) the Council’s September 14, 2021 final decision not to issue a declaratory ruling to SRNS for the 9.9 MW AC solar facility based on changed conditions pursuant to CGS §4-181a(b). SRNS notified the service list for the original Petition 1443 proceeding of the Motion to Reopen. (SRNS 1 – Motion to Reopen)
10. In its Motion to Reopen, SRNS proposed further modifications to the Petition 1443 Revised Project, including, but not limited to, completely eliminating solar panel construction on the parcel north of Providence-New London Turnpike (hereinafter referred to as the Modified Project). (Record)
11. On December 2, 2021, the Council issued a memorandum to the service list for the original Petition 1443 proceeding requesting comments or statements of position in writing with respect to whether the Motion to Reopen should be granted or denied and whether a public hearing should be held on this request by December 14, 2021. (Council Memorandum dated December 2, 2021; Record)
12. On December 14, 2021, the Town submitted comments to the Council indicating the Board of Selectmen voted to support SRNS’ Motion to Reopen and that the Town is not requesting a public hearing on the Modified Project. (Record)
13. At a public meeting held on December 16, 2021, the Council voted to grant SRNS’ Motion to Reopen, and to schedule a public hearing in accordance with CGS §4-176 and 4-181a(b). (Council Meeting Minutes of December 16, 2021; Council Memorandum dated December 20, 2021)

Procedural Matters

14. On March 10, 2020, Governor Lamont issued a Declaration of Public Health and Civil Preparedness Emergencies, proclaiming a state of emergency throughout the state as a result of the COVID-19 pandemic. (Council Administrative Notice Item No. 66)
15. On March 12, 2020, Governor Lamont issued Executive Order No. (EO) 7 ordering a prohibition of large gatherings, among other orders and directives. (Council Administrative Notice Item No. 66)
16. On March 14, 2020 and as subsequently extended, Governor Lamont issued EO 7B ordering suspension of in-person open meeting requirements of all public agencies under CGS §1-225. The Freedom of Information Act (FOIA) defines “meeting” in relevant part as “any hearing or other proceeding of a public agency.” (Council Administrative Notice Item No. 66; CGS §1-200, et seq. (2019))
17. EO 7B expired on June 30, 2021. Special Act (SA) 21-2 took effect on July 1, 2021. Section 149 permits public agencies to hold remote meetings under FOIA and the Uniform Administrative Procedure Act until April 30, 2022. (Council Administrative Notice Item No. 66 and 67)
18. SA 21-2 allows public agencies to hold remote meetings provided that:
 - a) The public has the ability to view or listen to each meeting or proceeding in real-time, by telephone, video, or other technology;
 - b) Any such meeting or proceeding is recorded or transcribed and such recording or transcript shall be posted on the agency’s website within seven (7) days of the meeting or proceeding;

- c) The required notice and agenda for each meeting or proceeding is posted on the agency's website and shall include information on how the meeting will be conducted and how the public can access it any materials relevant to matters on the agenda shall be submitted to the agency and posted on the agency's website for public inspection prior to, during and after the meeting; and
 - e) All speakers taking part in any such meeting shall clearly state their name and title before speaking on each occasion they speak.
(Council Administrative Notice Item No. 66 and 67)
19. On December 20, 2021, the Council notified the service list of the original Petition 1443 proceeding of the reopening of the matter. (Record)
 20. At a regular meeting held on January 13, 2022, the Council approved the public hearing schedule for the reopened matter, designating it as Petition 1443A. (Record)
 21. Pursuant to SA 21-2 and CGS §16-50m, on January 14, 2022, the Council sent a letter to the Town to provide notification of the scheduled remote public hearing via Zoom conferencing. (Record)
 22. Pursuant SA 21-2 and CGS §16-50m, the Council published legal notice of the date and time of the remote public hearing via Zoom conferencing in The Day on January 19, 2022. (Record)
 23. The Council's Hearing Notice did not refer to an in-person field review of the proposed site. Field reviews are not an integral part of the public hearing process. The purpose of a site visit is an investigative tool to acquaint members of a reviewing commission with the subject property. (Council's Hearing Notice dated January 14, 2022; Council Administrative Notice Item Nos. 68 and 69)
 24. On May 10, 2021, in Petition No. 1443, in lieu of an in-person field review of the proposed site, the Council requested the Petitioner submit photographic documentation of site-specific features into the record intended to serve as a "virtual" field review of the proposed site. On June 1, 2021, SRNS submitted such information in response to the Council's interrogatories. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #21)
 25. On January 19, 2022, the Council held a pre-remote hearing teleconference on procedural matters for parties and intervenors to discuss the requirements for pre-filed testimony, exhibit lists, administrative notice lists, expected witness lists, and filing of pre-hearing interrogatories. Procedures for the remote public hearing via Zoom conferencing were also discussed. (Council Pre-Remote Hearing Conference Memorandum, dated January 13, 2022)
 26. Pursuant to Regulations of Connecticut State Agencies (RCSA) § 16-50j-21, on January 25, 2022, SRNS installed a sign measuring six feet by four feet that included information about the proposed facility, the public hearing date and contact information for the Council. The sign was posted near the proposed site access road entrance to the solar facility area on the south side of Providence New London Turnpike (Route 184). (SRNS 2; Council Pre-Remote Hearing Conference Memorandum, dated January 13, 2022)
 27. Pursuant to CGS §16-50m, the Council, after giving due notice thereof, held a remote public hearing on February 15, 2022, beginning with the evidentiary session at 2:00 p.m. and continuing with the public comment session at 6:30 p.m. via Zoom conferencing. The Council provided access information for video/computer access or audio only telephone access. (Council's Hearing Notice dated January 14, 2022; Transcript 1 – February 15, 2022, 2:00 p.m. [Tr. 1], p. 1; Transcript 2 – February 15, 2021, 6:30 p.m. [Tr. 2], p. 100)

28. In compliance with SA 21-2:
- a) The public had the ability to view and listen to the remote public hearings in real-time, by computer, smartphone, tablet or telephone;
 - b) The remote public hearing was recorded and transcribed, and such recordings and transcripts were posted on the Council's website on February 15, 2022 and March 8, 2022, respectively;
 - c) The Hearing Notice, Hearing Program, Citizens Guide for Siting Council Procedures and Instructions for Public Access to the Remote Hearing were posted on the agency's website;
 - d) The record of the proceeding is available on the Council's website for public inspection prior to, during and after the remote public hearings; and
 - e) The Council and parties and intervenors provided their information for identification purposes during the remote public hearings.
- (Hearing Notice dated January 14, 2022; Tr. 1; Tr. 2; Record)
29. Pursuant to C.G.S. §16-50n(f), at the conclusion of the evidentiary hearing session held on February 15, 2022, the Council closed the evidentiary record for Petition 1443A and established March 17, 2022 as the deadline for the submission of briefs and proposed findings of fact. (Tr. 2, pp. 109-110; Record)
30. On March 8, 2022, SRNS submitted a Request to Submit Supplemental Information into the Evidentiary Record (Request to Submit Supplemental Information) to admit the Final Department of Energy and Environmental Protection (DEEP) Natural Diversity Database (NDDB) Determination (Final NDDB Determination) that was issued on March 7, 2022. (SRNS' Request to Submit Supplemental Information, March 8, 2022)
31. Also on March 8, 2022, the Council issued a memorandum to the Petition 1443A service list requesting parties and intervenors to submit comments as to whether or not SRNS' Request to Submit Supplemental Information should be granted for submission of the new exhibit, and if the evidentiary record is reopened, whether or not a hearing should be held for cross examination on the new exhibit. (Record)
32. On March 17, 2022, SRNS submitted a letter in lieu of a brief. (Record)
33. During the Council's March 24, 2022 regular meeting, the Council granted SRNS' Request to Submit Supplemental Information in the evidentiary record without a hearing. (Record)

Municipal Consultation

34. During the Petition 1443 proceedings, the Town expressed a preference for elimination of solar panel development on the parcel north of Providence New London Turnpike, as well as concerns related to historic resources, noise, visibility, and wetlands. The Town noted that the project selected under DEEP's 2016 Request for Proposals (RFP) (hereinafter, referred to as the RFP Project) was intended for an approximately 97 acre site containing the gravel pit (Southern Parcels), not the two northern parcels (Northern Parcels). (Council Administrative Notice Item No. 34 – Petition 1443, Findings of Fact #32-34)
35. On November 30, 2021, SRNS made a formal presentation of the Modified Project (which eliminates the solar arrays north of Providence New London Turnpike) to the Town's Board of Selectman and members of the public. (SRNS 1, p. 5)

State Agency Comments

36. Pursuant to RCSA §16-50j-40, on January 14, 2022, the following state agencies were requested to submit written comments regarding the proposed facility: DEEP; Department of Agriculture (DOAg); Department of Public Health (DPH); Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority (PURA); Office of Policy and Management (OPM); Department of Economic and Community Development (DECD); Department of Emergency Services and Public Protection (DESPP); Department of Labor (DOL); Department of Administrative Services (DAS); Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and the State Historic Preservation Office (SHPO). (Council State Agencies Memorandum, dated January 14, 2022)
37. The Council received comments from DEEP¹ on February 7, 2022. These comments are addressed in the following section of the document: Environmental Effects. (Record)
38. No other state agencies responded with comment on the petition. (Record)
39. While the Council is obligated to consult with and solicit comments from state agencies by statute, the Council is not required to abide by the comments from state agencies. (Council Administrative Notice Item No. 72, *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007))

Changed Conditions

40. In its Motion to Reopen, SRNS noted several changed conditions from the Revised Project to the Modified Project including, but not limited to, the following:
 - a) Eliminate any solar arrays north of Providence New London Turnpike, i.e. install all solar arrays south of Providence New London Turnpike;
 - b) Increase solar panel wattage from 475 Watts to 480 Watts;
 - c) Reduce the number of solar panels by approximately 4,550;
 - d) Reduce the total limits of disturbance;
 - e) Reduce the number of trees to be cleared by approximately 684;
 - f) Reduce the amount of cut and fill;
 - g) Reduce impacts to wetland and increase certain wetland buffers;
 - h) Increase the setback from the abutting property boundary at 476 Providence New London Turnpike; and
 - i) Install approximately 490 linear feet of a 6-foot tall wooden fence* for visual screening along a portion of the abutting property line at 476 Providence New London Turnpike.

*This was later revised to about 640 linear feet of 8-foot tall wooden fence as a result of discussions between SRNS and the abutting property owner.

(SRNS 1, pp. 6-7 and 12; Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #104; Tr. 1, pp. 34-35)

¹https://portal.ct.gov/-/media/CSC/3_Petitions-medialibrary/Petitions_MediaLibrary/MediaPetitionNos1441-1450/PE1443A/ProceduralCorrespondence/pe1443a-sacrcdpi-deep-20220207.pdf

State of Connecticut Planning and Energy Policy

41. Section 51 of Public Act (PA) 11-80 requires that DEEP prepare a Comprehensive Energy Strategy (CES) every three years that reflects the legislative findings and policy stated in CGS §16a-35k. As such, this statute consolidated Connecticut's energy planning for the first time. The final version of the state's inaugural CES was published on February 19, 2013 (2013 CES). It advocated smaller, more diversified generation projects using renewable fuels, as well as smaller, more innovative transmission projects emphasizing reliability. (Council Administrative Notice Item No. 34 – Petition No. 1443, Finding of Fact #40; CGS §16a-3d)
42. On February 8, 2018, DEEP issued the 2018 Comprehensive Energy Strategy (2018 CES). Guided by the long-term vision of transitioning to a zero-carbon economy, the 2018 CES highlights eight key strategies to guide administrative and legislative action over the next several years. Specifically, strategy No. 3 is “Grow and sustain renewable and zero-carbon generation in the state and region.” (Council Administrative Notice Item No. 44 – 2018 CES, p. 14)
43. CGS §16-245a establishes Connecticut's *Renewable Portfolio Standards (RPS)*. Currently, RPS requires that 24 percent of Connecticut's electricity usage be obtained from Class I renewable resources by 2022. These percentage increases annually and reaches 40 percent by 2030. (CGS §16-245a)
44. The Global Warming Solutions Act (GWSA) sets a goal of reducing greenhouse gas (GHG) emissions by 80 percent by 2050. (CGS §22a-200)
45. The proposed facility will contribute to fulfilling the State's RPS and GWSA as a zero emission Class I renewable energy source. (Council Administrative Notice Item No. 44 – 2018 CES)
46. Section 7 of PA 08-98 required the Governor's Steering Committee on Climate Change to establish an Adaptation Subcommittee to evaluate the projected impacts of climate change on Connecticut agriculture, infrastructure, natural resources and public health and develop strategies to mitigate these impacts. (Council Administrative Notice Item No. 58 – Climate Change Preparedness Plan)
47. Governor Lamont's 2019 Executive Order No. 3 declares the state's goal to reach 100 percent carbon free electricity by 2040. (Governor Lamont's Executive Order No. 3, September 3, 2019)

Competitive Energy Procurement

48. On March 9, 2016, DEEP issued notice for a RFP for Class I renewable energy sources and Class III sources with a nameplate capacity rating of more than 2 MW and less than 20 MW (Small Scale RFP). Project selection occurred on November 28, 2016. On June 27, 2017, DEEP issued its final determination in the RFP and selected 25 out of 107 proposed projects to enter into long-term power purchase agreements (PPAs) with the electric distribution companies (EDCs) for a combination of energy and environmental attributes. The RFP Project was one of the 25 projects selected. (Council Administrative Notice Item No. 34 – Petition No. 1443, Finding of Fact #48; SRNS 1, p. 2)

49. When the RFP Project was selected in the DEEP Small Scale RFP in 2016, it was listed as, “North Stonington Solar Plant + Park Project, NS Solar Plant I Facility” to be developed by Connecticut Energy Parks, LLC (CEP). * Plans to include energy storage, a microgrid and a park were included in the project bid and discussed with the Town. SRNS has no affiliation with CEP. (Council Administrative Notice Item No. 34 – Petition No. 1443, Finding of Fact #49)

*Public Act 15-107, DEEP Small Scale RFP, North Stonington Solar Plant + Park Project, NS Solar Plant I Facility Bid, available at:
[http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb85257fa8008130c3/\\$FILE/North%20Stonington%20Solar%20Plant%20+%20Park%20Bid%20REDACT.pdf](http://www.dpuc.state.ct.us/DEEPEnergy.nsf/c6c6d525f7cdd1168525797d0047c5bf/8525797c00471adb85257fa8008130c3/$FILE/North%20Stonington%20Solar%20Plant%20+%20Park%20Bid%20REDACT.pdf)

50. The RFP Project area consisted of 97 acres located south of Route 184. No solar panels were proposed to be installed to the north of Route 184. (Council Administrative Notice Item No. 34 – Petition No. 1443, Finding of Fact #50)
51. In 2017, SRNS acquired the RFP Project from Renewable Ventures, LLC (RV). (Council Administrative Notice Item No. 1443, Finding of Fact #51)

Power Purchase Agreements

52. Under PPAs, SRNS would sell all of the electricity produced by the project to two Connecticut EDCs – The Connecticut Light and Power Company d/b/a Eversource Energy (Eversource) and The United Illuminating Company (UI) – pursuant to its selection under the DEEP Small-Scale RFP. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #52; SRNS 1, p. 2; SRNS 3, response 1)
53. On September 7, 2017, PURA issued regulatory approval of the RFP Project PPAs in Docket No. 17-01-11, *PURA Review of Public Act 15-107(b) Small-Scale Energy Resource Agreements*. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #54)
54. On June 13, 2018, PURA approved a request from CEP to amend the existing PPAs to add the Northern Parcels to the site due to environmental constraints on the Southern Parcels. Notice to the Town was not required. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #55)
55. There are no provisions for extending the PPAs after the 20-year term, and there is no option to renew. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #56)
56. A renewable energy certificate (REC) certifies that one megawatt-hour (MWh) of renewable electrical energy has been generated. RECs create a market to separate renewable energy attributes and resource output. Environmental attributes are sold into the REC markets. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #57)
57. The PPAs assign attributes such as capacity, energy and RECs. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #58; Tr. 1, p. 16)
58. SRNS is seeking an amendment to the PPAs to take into account the Modified Project and anticipates securing approval from PURA for such amendment. (Tr. 1, p. 16)

59. SRNS would not participate in the Agricultural Virtual Net Metering Program or other virtual net metering programs. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #59; Tr. 1, pp. 16-17)
60. SRNS did not participate in Independent System Operator – New England (ISO-NE) Forward Capacity Auction (FCA) #15 or #16. SRNS has no plans to participate in FCAs at this time; notwithstanding, at each annual milestone, it would evaluate the possibility of future participation. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #60; SRNS 3, response 2)

Public Benefit

61. A public benefit exists when a facility is necessary for the reliability of the electric power supply of the state or for the development of a competitive market for electricity. (CGS. §16-50p)
62. The project would be a distributed energy resource facility as defined in CGS §16-1(a)(49). 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.” (CGS §16-1(a)(49); CGS §16a-35k)
63. PA 05-1, An Act Concerning Energy Independence, established a rebuttable presumption that there is a public benefit for electric generating facilities selected by the Department of Public Utility Control (DPUC, now known as PURA) in a Request for Proposals. (PA 05-1; CGS§16-50k)

Public Act 17-218

64. Effective July 1, 2017, PA 17-218 requires, “for a solar photovoltaic facility with a capacity of two or more megawatts, to be located on prime farmland or forestland, excluding any such facility that was selected by DEEP in any solicitation issued prior to July 1, 2017, pursuant to section 16a-3f, 16a-3g or 16a-3j, the DOAg represents, in writing, to the Council that such project will not materially affect the status of such land as prime farmland or DEEP represents, in writing, to the Council that such project will not materially affect the status of such land as core forest.” Because the project was selected by DEEP in a solicitation prior to July 1, 2017, the project is exempt from this provision of PA 17-218. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #64; CGS §16-50k)
65. Pursuant to CGS §16-50x, the Council has exclusive jurisdiction over the construction, maintenance and operation of solar photovoltaic electric generating facilities throughout the state. PA 17-218 does not confer the Council’s exclusive jurisdiction upon DOAg or DEEP nor does it permit DOAg or DEEP to impose any enforceable conditions on the construction, maintenance and operation of solar photovoltaic electric generating facilities under the exclusive jurisdiction of the Council. (CGS §16-50k and 16-50x)
66. PA 17-218 also requires that the Council not find a substantial adverse environmental effect in its exercise of jurisdiction over facilities eligible to be approved by declaratory ruling under CGS §16-50k. There are no exemptions from this provision of PA 17-218. (CGS §16-50k)

Site Selection

67. RV, the prior owner of the project selected the RFP Project site based on the following factors:
 - a) Site suitability such as size, grading and topography;
 - b) Site availability for lease or purchase;
 - c) Proximity to electrical grid; and

- d) Local land use considerations.
(Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #67)
68. SRC acquired the RFP Project from RV in 2017. It did not consider alternative locations due to selection of the project in the DEEP Small Scale RFP and completed environmental evaluations. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #68)
69. Due to environmental constraints on the Southern Parcels, SRNS evaluated alternative parcels before acquiring the Northern Parcel to develop the project. The RFP Project site host parcels consisted of 97 acres located south of Route 184. The Original Project and the Revised Project site host parcels consisted of 157 acres located both north and south of Route 184. The Modified Project, which is currently proposed, would be located on host parcels consisting of 126 acres that are located only south of Route 184. (Council Administrative Notice Item No. 34 – Petition 1443, Findings of Fact #69 and #72; SRNS 1, p. 5)
70. Pursuant to CGS §16-50p(g), the Council has no authority to compel a parcel owner to sell or lease property, or portions thereof, for the purpose of siting a facility. (Council Administrative Notice Item No. 72 - *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007))

Site

71. Pursuant to RCSA §16-50j-2a(29), “Site” means a contiguous parcel of property with specified boundaries, including, but not limited to, the leased area, right-of-way, access and easements on which a facility and associated equipment is located, shall be located or is proposed to be located. (RCSA §16-50j-2a(29))
72. The Modified Project site is located on four parcels totaling approximately 126 acres. The four parcels (collectively, the subject property) are contiguous and are listed as follows:
- a) An approximately 63.54-acre parcel located north of I-95 and between Cranberry Bog Road (to the west) and Boombridge Road (to the east);
 - b) An approximately 32.94-acre parcel located north of I-95 and between Cranberry Bog Road (to the west) and Boombridge Road (to the east);
 - c) An approximately 1.33-acre parcel located north of I-95 between Spencer Drive (to the west) and Boombridge Road (to the east); and
 - d) An approximately 28.22-acre parcel located south of Route 184 between Stillman Road/Miner Meeting House Road (to the west) and Boombridge Road (to the east).
- (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #72; SRNS 1, p. 5)
73. The site parcels are owned by SRC and are located within the Town’s R-60 Medium-density Residential District. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #73)
74. Until approximately the 1970s, the Southern Parcels were used as agricultural land. No portion of the site is currently in productive agricultural use. Between the 1960s and 2004, significant portions of the Southern Parcels were excavated to facilitate a sand and gravel mining operation. The Southern Parcels are traversed by two headwater stream corridors and a drainageway. A small family cemetery is located in the westerly portion of the site. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #74)

75. The remaining areas of the Southern Parcels contain forested uplands and wetland areas. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #75)
76. The surrounding land uses include low density residential, two dog kennels, a dog breeder, Route 184 and I-95. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #76)

Project Description

Solar Array

77. The bifacial solar panel wattages and quantities based on project configurations are listed below.

Configuration	Solar Panel Wattage	Quantity
Original Project	455 Watt	28,890
Revised Project	475 Watt	29,675
Modified Project (proposed)	480 Watt	25,125

(Council Administrative Notice Item No. 34, Petition 1443, Findings of Fact #77 and #115; SRNS 3, response 4, Attachment 1; SRNS 1, p. 6)

78. The solar panels would be fixed, arranged in a portrait orientation and oriented facing south. The panels would be installed at a 25 degree angle, extending to a height of approximately 8 feet above grade and approximately 2 feet above grade at the bottom edge. (SRNS 1, Attachment A, Drawings PV-100 and PV-103)
79. The solar panels for the Modified Project would be located within a total of two (rather than four), separate fenced array areas listed below:

Fenced Array Area	Location	MW AC	Area of Fenced Array in Acres
Western Array Area (f/k/a Area 3)	West side of Southern Parcels	5.43 MW	20.92 acres
Eastern Array Area (f/k/a Area 4)	East side of Southern Parcels	2.92 MW	10.57 acres
Total Capacity		8.35 MW	

(SRNS 1, pp. 6-7; SRNS 3, responses 9 and 10)

80. The solar panels would be installed on racking systems supported by ground screws that would be embedded to a maximum of 6 to 7 feet into the ground. Subsurface conditions would determine the final type(s) of supports to be installed. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #80)
81. Solar array rows (panel edge to panel edge) would be spaced 8.8 feet apart. Once installed, the horizontal width of the panel row would measure 13.2 feet (from bottom edge to top edge at a 25 degree angle). (SRNS 1, Attachment A, Drawing PV-100)
82. Wiring from the inverters to the transformers and from the transformers to the switchgear would be run underground in conduits. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #82)

83. The Western Array Area would contain two equipment pads: one in the north-central portion of the area and one in the south-central portion of the area. The Eastern Array Area would contain one equipment pad in the northwestern portion of this area. (SRNS 1, Attachment A, Drawing PV-100)
84. Each of the two array areas would be enclosed by a 7-foot tall chain link fence with one foot of barbed wire on top. The fence design would comply with the National Electrical Code (NEC). The fence would also have a two-inch gap at the bottom of the fence to ensure safety and compliance with Adaptive Multi-Paddock grazing techniques. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #84; SRNS 1, Attachment A, Drawing C700; Tr. 1, pp. 18-20)
85. SRNS is willing to consider more aesthetic fence designs that would secure the facility, as well as deter trespassing and dumping that has historically occurred on the Southern Parcels. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #85)
86. The total fence lengths in linear feet for the project configurations are listed in the table below.

Original Project Fence Length in feet	Revised Project Fence Length in feet	Modified Project (proposed) Fence Length in feet
15,433 feet	13,967 feet	7,058 feet*

*This is based on the chain link security fence only. A wood stockade section for visual screening is not included.
 (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #86; SRNS 1, Attachment A, Drawing PV-100; Tr. 1, p. 19)

87. Solar panels would be installed at the following distances from the project perimeter fencing for the Modified Project

Fenced Array Area	Modified Project Solar Panels to Fence Line in feet
Western Array Area	~ 5 to 130 feet
Eastern Array Area	~ 13 to 142 feet

(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #87; SRNS 1, Attachment A, Drawing PV-100)

88. The distances from the solar facility fence to the nearest property lines and off-site residences for the project configurations are listed in the table below.

Fenced Array Area	Original Project Nearest Property Line in feet	Original Project Nearest Residence in feet	Revised Project Nearest Property Line in feet	Revised Project Nearest Residence in feet	Modified Project Nearest Property Line in feet	Modified Project Nearest Residence in feet
Western Array Area (f/k/a Area 3)	99 feet to the west	132 feet to the east	35 feet to the northwest	132 feet to the east	30 feet to the west	132 feet to the east
Eastern Array (f/k/a Area 4)	0.5 foot to the north*	104 feet to the north**	0.5 foot to the north*	104 feet to the north**	14 feet to the north	104 feet to the north**

*The security fence (located directly north of the proposed access drive) for Area 4 would be approximately six inches from the nearest property line at its closest point.

**While the residence is located 104 feet away, the nearest structure on that residential property is approximately 16 feet away.

(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #88; SRNS 1, Attachment A, Drawing PV-100)

Site Access

89. For the Modified Project, the Western Array would be accessed via a new 16-foot wide by 1,483-foot long gravel access drive that would extend to the south off of Route 184. For the Eastern Array, a 16-foot wide by 2,228-foot long gravel access would be constructed by upgrading an existing farm access road that extends to the west off of Boombridge Road. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #89; SRNS 3, response 8; SRNS 1, Attachment A, Drawing PV-100)

90. The total access road lengths for the project configurations are listed in the table below.

Original Project Access Road Length in feet	Revised Project Access Road Length in feet	Modified Project (proposed) Access Road Length in feet
6,756 feet	5,091 feet	3,711 feet

(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #90; SRNS 3, response 8)

Electrical Interconnection

91. The Modified Project would have a single, independently-metered system with a design capacity of approximately 8.35 MW AC. Electrical loss assumptions have been factored into the output of the facility. The facility output would be 8.35 MW AC at the point of interconnection. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #91; SRNS 1, p. 5)

92. The project would interconnect to a new 13.8-kV distribution feeder that Eversource would construct from Shunock 32P Substation at 25 Pendleton Hill Road, North Stonington. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #92)

93. The point of interconnection would be located near the Western Array Area and west of the access drive off of Route 184. An underground feeder would exit the solar facility and transition to overhead along Route 184 while utilizing three new 50-foot tall utility poles. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #93; Tr. 1, pp. 23, 68; SRNS 1, Attachment A, Drawing PV-100)

94. The interconnection design and construction would be in accordance with Eversource and UI Guidelines for Generation Interconnection as well as State of Connecticut, ISO-NE and Federal Energy Regulatory Commission requirements as applicable. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #94)

95. The demarcation point (or location of change of control from SRNS to Eversource) would be the load side of the primary meter. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #95)

96. SRNS completed a distribution System Impact Study which determined that the project is compliant with requirements identified in the Eversource and UI Generation Interconnection Technical Requirements document. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #96)
97. The project interconnection is not required to be reviewed by ISO-NE. ISO-NE reviewed and approved the project’s distribution system impact study in July 2020. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #97)
98. A modified distribution impact study is not required due to the reduction in capacity associated with the Modified Project. (SRNS 3, response 5)
99. SRNS discussed with Eversource the possibility of installing all of the electrical interconnection route underground before its final connection to Eversource’s overhead distribution system. Eversource is reviewing this possibility but notes that they have not previously performed an interconnection with such configuration. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #98)
100. The intra-connection of the Western Array and the Eastern Array would run in an east-west direction and would require a crossing of Wetland E. This could be accomplished by boring under the wetland or via an overhead connection spanning the wetland to avoid impacts. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #100; SRNS 1, Attachment A, Drawing PV-100)

Project Construction

101. The following permits would be required for construction and operation of the project:
 - a) DEEP Stormwater Permit;
 - b) United States Army Corps of Engineers New England District – Connecticut General Permits as a Self-Verification Notification Form eligible project under Federal Clean Water Act Sections 404 and 401 (401 Water Quality Certificate administered by DEEP);
 - c) Town Building and Electrical Permits;
 - d) Municipal Road Opening Permit; and
 - e) DOT Encroachment Permit.
 (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #102)
102. The laydown and delivery area, construction trailer(s) area and a gravel temporary parking area would be located immediately west of the access road to the Western Array and south of Route 184. These areas are listed below based on project configuration.

	Laydown and Delivery Area in Acres	Construction Trailers Area in Acres	Temporary Gravel Parking Area in Acres	Total Area
Original Project	1.17-acre	0.10-acre	0.50-acre	1.77-acre
Revised Project	0.83-acre	0.10-acre	0.50-acre	1.43-acre
Modified Project (proposed)	0.41-acre	0.10-acre	0.50-acre	1.01-acre

(Council Administrative Notice Item No. 34, Petition 1443, SRNS 1, Attachment A, Drawing PV-100 and SRNS 6 Attachment 4, Drawing PV-100; Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #103; SRNS 1, p. 7; SRNS 1, Attachment A, Drawing PV-100)

103. The number of trees six inches diameter or greater to be removed and equivalent tree clearing areas based on project configuration are listed below.

	Number of trees ≥ 6” in diameter to be removed	Equivalent tree clearing area in acres
Original Project	3,496	46 acres
Revised Project	3,344	44 acres
Modified Project (proposed)	2,660	35 acres

(Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #104; SRNS 1, p. 12)

104. Existing grades would be utilized to the fullest extent possible in order to minimize earth work, but some earth work is proposed in order to control stormwater runoff and meet equipment tolerances. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #105)
105. The site would be graded as necessary to accommodate the stormwater basins, ditching and access roads. The Modified Project would require significantly less grading than the Revised Project. (SRNS 3, response 23a)
106. Over 95 percent of the slopes for the Modified Project would be between 0 percent and 15 feet. The remaining slopes would be between 15 percent and 17.5 percent. The Modified Project would utilize a racking system that could accommodate up to 20 percent slopes if necessary. (SRNS 3, responses 23b and 23c)
107. The amounts of cut and fill for grading of the access roads and solar field based on the project configurations are listed below.

	Access Road Cut in cubic yards	Access Road Fill in cubic yards	Solar Field Cut in cubic yards	Solar Field Fill in cubic yards
Original Project	>2,227	>2,193	>1,046	>690
Revised Project	2,227	2,193	1,046	690
Modified Project (proposed)	1,556	2,366	555	216

(Council Administrative Notice Item No. 34, Petition 1443, Findings of Fact #108 and #109; SRNS 3, responses 23e and 23f)

108. If approved, SRNS would prefer to commence the tree clearing in advance of June 2022 and then continue with construction of the facility. (Tr. 1, p. 21)
109. Construction hours would be Monday through Saturday from 7:00 AM to 7:00 PM and Sunday, if necessary. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #111)

Traffic

110. During construction, approximately 60 to 70 construction vehicles of average/light duty size would visit the site daily. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #112)

111. Once operational, the site would require minimal traffic. Typically, one to two light-duty vehicles would visit the site per month on average to perform standard operations and maintenance activities. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #113)

Facility Operation

112. The capacity factors based on project configurations are listed below.

Configuration	Capacity Factor*
Original Project	21 percent
Revised Project	21 percent
Modified Project (proposed)	19.7 percent**

*This takes into account factors such as hard shading, e.g. weather events, dust, and pollen.

**The reduction in capacity factor for the Modified Project is due to reduced tree clearing and site consolidation effects on shading.

(Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #114; SRNS 3, response 5)

113. The solar panel wattages and efficiency factors based on project configurations are listed below.

Configuration	Solar Panel Wattage*	Efficiency Factor
Original Project	455 Watt	20.9 percent
Revised Project	475 Watt	>20.5 percent
Modified Project (proposed)	480 Watt	20.7 percent

*All of the solar panels listed are bifacial. This conservatively represents the power output from the front side of the panels.

(Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #115; SRNS 3, response 4, Attachment 1)

114. SRNS has no plans to incorporate a battery storage system into the project. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #116; SRNS 3, response 6)

115. The project is not designed to serve as a microgrid. It would require extensive design changes to perform this function including, but not limited to, the inclusion of an energy storage system. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #117; SRNS 3, response 7)

Operations and Maintenance

116. SRNS provided a post-construction Operations and Maintenance Plan (O&M Plan) that includes, but is not limited to, provisions for remote monitoring, equipment maintenance, and site safety and security. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #118)

117. The main topics of the post-construction O&M Plan include, but are not limited to, the following:
- a) Emergency response;
 - b) System monitoring;
 - c) System performance monitoring;
 - d) Preventative and scheduled maintenance;
 - e) Notification procedures for performance or safety issues;

- f) Technical training; and
 - g) Site access.
- (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #119)

118. For vegetation maintenance, SRNS proposes Adaptive Multi-Paddock sheep grazing which would supplement mowing at the site. Mowing would occur approximately three to five times per year typically during the March/April, July/August, and September/October time periods subject to weather conditions. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #120)
119. No snow removal is expected. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #121)
120. SRNS would store spare solar panels on site in a storage container. The quantity of panels would be approximately 0.1% of the installed panels. The storage container would be located either in the laydown area (south of Route 184) or adjacent to the stormwater basin near the southwest corner of the southwestern solar array. Any damaged panels would be detected via direct current health analytics performed at the site or through aerial thermal imaging of the facility. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #122)

Project Decommissioning

121. The project has a design life of approximately 40 years. Specifically, the solar panels are projected to have a service life of at least 40 years, and SRNS has no plans at this time to replace the panels at the end of such life. SRNS is amenable to operating the facility beyond the 40 year life as long as the solar panels remain productive. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #123)
122. At the end of the project's lifespan, it will be fully decommissioned and removed from the property. The site would be restored to its original condition, with the exception of any access roads and fencing which may remain if useful for future use of the site. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #124)
123. SRNS intends to recycle project materials, including solar panels, to the maximum extent practicable at the end of the life of the project. Project materials that cannot be recycled would be removed from the site and disposed of at a licensed disposal facility. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #125)
124. SRNS obtained Toxicity Characteristic Leaching Procedure (TCLP) test results from the manufacturer of the solar panels for the Modified Project, and per the test results, the solar panels would not be characterized as hazardous waste at the time of disposal. (SRNS 3, response 24, Attachment 5)

Public Safety

125. The proposed project would comply with the NEC, the National Electrical Safety Code (NESC) and the National Fire Protection Association (NFPA) code. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #127)
126. Prior to commencement of operation, SRNS would meet with the Town first responders to provide them with information regarding response to emergencies on solar facilities, discuss industry best practices and provide a tour of the site and project. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #128)

127. Emergency responders would be provided access to the site via a “knox box” (or equivalent) to allow rapid access through all of the gates on a 24/7 basis. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #129)
128. The facility would be remotely monitored on a 24/7 basis by SR or its representatives. In the event of a fire, SR would remotely disconnect the facility from the Eversource grid, cease inverter operation and de-energize the project while personnel are dispatched to the facility. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #130)
129. The majority of the site is located within Federal Emergency Management Agency (FEMA)-designated Zone X, which is an area outside of the 500-year flood zone with a minimal risk flooding. The extreme southwestern portion of the site is identified as Zone A, a high flood risk area; no development is proposed in this portion of the site. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #131; SRNS 1, Attachment I – Drainage Assessment, Appendix B – FEMA Flood Map; SRNS 1, Attachment B, Overall Civil Plan; Tr. 1, p. 20)
130. SRNS had discussions with DEEP regarding the potential need for a dam permit or registration. The stormwater basin storage volumes and embankment heights appear to be well under the threshold for a dam permit or registration. Notwithstanding, DEEP would review this again when SRNS applies for its stormwater permit. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #132)
131. The FAA requires a glare analysis for on-airport solar development at federally obligated airports. Federally obligated airports are airports that receive federal funding. The FAA recommends that the design of any solar installation at an airport consider the approach of pilots and ensure pilots will not have to face glare that is straight ahead of them or within 25 degrees of straight ahead during the final approach. (Council Administrative Notice Item Nos. 15-17)
132. The nearest federally-obligated airport to the facility is T.F. Green International Airport in Warwick, Rhode Island, located approximately 32.6 miles from the site. According to the FAA Notice Criteria Tool, the project does not exceed FAA notice criteria. Thus, no additional consultation with FAA, and no glare analysis is required. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #134; SRNS 1, p. 13)

Noise

133. Noise emissions from the solar facility would be from the transformers and inverters. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #135)
134. The transformers and inverters would only operate during the day when electricity is produced by the solar panels. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #136)
135. The project was modeled as a Class A (residential) emitter, and its surrounding abutters are considered Class A receptors. The DEEP Noise Control Limits for a Class A emitter to a Class A receptor for is 55 dBA during the daytime. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #137)
136. The Original Project would be in compliance with DEEP Noise Control Standards because the highest predicted sound level at the surrounding receptor locations would be 44.9 dBA. The Modified Project is expected to have lower noise levels* than the Original Project because several of the inverters have

been removed, and several of the remaining inverters have been relocated farther away from surrounding receptors.

*The analysis is also conservative because the noise attenuation effects of the trees to remain were neglected.

(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #138; RCSA §22a-69-3.5; SRNS 3, response 14; Tr. 1, pp. 28-29)

137. Construction noise is exempt from DEEP Noise Control Standards. (RCSA §22a-69-108(g))

Environmental Effects

Air Quality

138. The proposed project would meet DEEP air quality standards and would not produce air emissions of regulated air pollutants or greenhouse gases (GHG). The project does not require an air permit. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #141)
139. An equivalent-sized combined cycle natural gas fueled electric generating facility would produce a median value of about 256,714 metric tons of carbon dioxide equivalent (MT CO₂eq) over an equivalent 40-year service life. The Modified Project would have an estimated median carbon debt of 5,549 MT CO₂eq. Thus, the solar facility would result in a 97.8 percent reduction in GHG emissions. (SRNS 3, response 15, Attachment 2)
140. During construction of the proposed project, any air emissions effects would be temporary in nature, and potential effects on air quality would be de minimus. Air emissions during construction would be minimized through appropriate mitigation measures such as the use of water for dust control and avoiding mass early morning vehicle startups. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #143; Tr. 1, p. 30)

Water Quality

141. As applicable to any proposed jurisdictional facility site, the Council's Filing Guide for a Petition for a Declaratory Ruling for a Renewable Energy Facility requires the submission of Plans for erosion and sedimentation control consistent with the *2002 Connecticut Guidelines for Erosion and Sedimentation Control* (2002 E&S Guidelines); Water consumption and discharge rates; FEMA Flood Zone information and associated flood mitigation plans; Proximity to DEEP Aquifer Protection Areas; DEEP groundwater classification underlying the site; Wetland and Watercourse Analysis Report and map, and associated Wetland and Watercourse Impact Mitigation Plan; and Vernal Pool Analysis Report and map, and associated Vernal Pool Impact Mitigation Plan. (Record)
142. During operation, the project would not require water use. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #145)
143. Groundwater at the site is classified by DEEP as "GA" which indicates groundwater that is presumed to be suitable for human consumption without treatment. No impacts on water quality are anticipated to result from the project. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #146; RCSA §22a-426-7(d)(2))

144. The site is located within the Town's Aquifer Protection Zone. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #147)
145. The site is not located within a DEEP-designated Aquifer Protection Area (APA). The nearest DEEP-designated APA is located approximately 3.6 miles northwest of the site. (Council Administrative Notice Item No. 86; Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #148)
146. No on-site fuel storage is proposed for the Modified Project. SRNS would utilize mobile fuel delivery by truck only. SRNS would work with its contractor to develop temporary containment measures. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #149; Tr. 1, p. 58)
147. SRNS has a draft Spill Prevention, Control, and Countermeasure (SPCC) Plan which may be updated or refined based on the final design and construction conditions. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #150; SRNS 1, Attachment F)
148. The ground screws to support the racking system are not expected to result in groundwater quality issues. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #151)
149. There are no drinking water wells at the site. Impacts to surrounding wells are not expected because, although well construction specifics are not known, it is likely that any potable drinking water wells installed within the bedrock aquifer are at depths far below the construction zone. Thus, no disruptions to well water flows or water quality is anticipated, and no specific precautions are warranted. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #152)

Stormwater

150. Pursuant to CGS Section 22a-430b, DEEP retains final jurisdiction over stormwater management and administers permit programs to regulate stormwater discharges. DEEP regulations and guidelines set forth standards for erosion and sedimentation control, stormwater pollution control and best engineering practices. (CGS §22a-430b; DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities. (DEEP-WPED-GP-015)
151. The DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit) requires implementation of a Stormwater Pollution Control Plan (SWPCP) to prevent the movement of sediments off construction sites into nearby water bodies and to address the impacts of stormwater discharges from a proposed project after construction is complete. In its discretion, DEEP could require an Individual Permit for discharges and hold a public hearing prior to approving or denying any General or Individual Permit (Stormwater Permit) application. (CGS Section 22a430b; CGS Section 22a-430(b))
152. The SWPCP incorporates project designs consistent with the 2002 E&S Guidelines and the *2004 Connecticut Stormwater Quality Manual* (2004 Stormwater Manual). (DEEP-WPED-GP-015)
153. DEEP has the authority to enforce proposed project compliance with its Individual or General Permit and the SWPCP, including, but not limited to, the installation of site-specific water quality protection measures in accordance with the 2002 E&S Guidelines and 2004 Stormwater Manual. (CGS Section 22a-430b)
154. The Council may impose a condition that requires subsequent compliance with DEEP standards and regulations. (Council Administrative Notice No. 70)

155. The project would require a DEEP-issued Stormwater Permit prior to commencement of construction activities as defined in the General Permit. (CGS Section 22a-430b)
156. The Modified Project would comply with the 2002 E&S Guidelines and 2004 Stormwater Quality Manual. (Tr. 1, pp. 20-21; SRNS 1, Attachment I – Drainage Assessment, p. 261)
157. The rows of solar panels are not considered “closed systems” because of the gaps between each module. Therefore, the drip edge of each solar panel would not impact the site’s drainage patterns because stormwater would flow off of the panels at multiple locations as the panels follow the land contours. After construction is complete and the site is fully stabilized, channelization along the drip edge is not expected. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #161)
158. Stormwater calculations were performed for 2, 10, 25, 50, and 100-year storms. The engineering stormwater management system for the Modified Project would result in an overland drainage pattern that would mimic existing conditions. (SRNS 1, Attachment I, Drainage Assessment, p. 3)
159. The Modified Project would comply with Appendix I of the DEEP Stormwater Permit. (Tr. 1, p. 83)
160. As of February 8, 2022, the DEEP Stormwater Permit had not yet been issued because the Final NDDB Determination had not yet been issued at the time. The Final NDDB Determination was issued by DEEP on March 7, 2022. (SRNS 3, response 22; SRNS Supplemental Information dated March 8, 2022)
161. An undisturbed vegetative buffer between a developed area and a wetland resource can filter pollutants and protect water quality from stormwater runoff. (Council Administrative Notice No. 40 - 2004 Stormwater Quality Manual, pp. 4-3 – 4-4)
162. Generally, a minimum 100-foot undisturbed upland buffer along a wetland boundary or on either side of a watercourse should be maintained to promote water quality. Establishment of buffers should also consider slopes and the sensitivity of wetland/watercourse resources. (Council Administrative Notice No. 40 – 2004 Stormwater Manual, pp. 4-3 – 4-4)

Wetlands and Watercourses

163. The Inland Wetlands and Watercourses Act (IWWA), CGS §22a-36, *et seq.*, contains a specific legislative finding that the inland wetlands and watercourses of the state are an indispensable and irreplaceable but fragile natural resource with which the citizens of the state have been endowed, and the preservation and protection of the wetlands and watercourses from random, unnecessary, undesirable and unregulated uses, disturbance or destruction is in the public interest and is essential to the health, welfare and safety of the citizens of the state. (CGS §22a-36, *et seq.*)
164. The IWWA grants regulatory agencies with the authority to regulate upland review areas in its discretion if it finds such regulations necessary to protect wetlands or watercourses from activity that will likely affect those areas. (CGS §22a-42a)
165. The IWWA forbids regulatory agencies from issuing a permit for a regulated activity unless it finds on the basis of the record that a feasible and prudent alternative does not exist. (CGS §22a-41)

166. Under the IWWA:
- a) “Wetlands” means land, which consists of any of the soil types designated as poorly drained, very poorly drained, alluvial, and floodplain by the National Cooperative Soils Survey, as may be amended from time to time, of the Natural Resources Conservation Service of the United States Department of Agriculture;
 - b) “Watercourses” means rivers, streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs and all other bodies of water, natural or artificial, vernal or intermittent, public or private, which are contained within, flow through or border the state; and
 - c) Intermittent watercourses are delineated by a defined permanent channel and bank and the occurrence of two or more of the following characteristics: (A) Evidence of scour or deposits of recent alluvium or detritus, (B) the presence of standing or flowing water for a duration longer than a particular storm incident, and (C) the presence of hydrophytic vegetation. (CGS §22a-36, *et seq.*)
167. Wetland inspections and delineations were performed during April 2017, November 2018, May 2019, and June 2019. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #172)
168. The following wetlands were identified on the Southern Parcels and are listed below with their respective distances to the array area fence lines for the project configurations.

Wetland	Location	Original Project Buffer Distance to Fence Line in Feet	Revised Project Buffer Distance to Fence Line in Feet	Modified Project Buffer Distance to Fence Line in Feet (proposed)
B/1B	East and Southeast of Eastern Array	~25 feet	~100 feet	~100 feet
C	South of Eastern Array	~25 feet	>100 feet	<100 feet*
1C	Southwest of Eastern Array	>100 feet	>100 feet	>100 feet
E	Between Western Array and Eastern Array	>100 feet	~25 feet*	<100 feet*
2E	South of Western Array	>100 feet	>100 feet	>100 feet
3E	Southwest of Western Array	>100 feet	>100 feet	>100 feet
F	Southwest of Western Array	~100 feet	>100 feet	>100 feet
G	Southwest of Eastern Array	>100 feet	>100 feet	>100 feet
H	Southwest of Western Array	>100 feet	>100 feet	>100 feet
H1	West of Eastern Array	>100 feet	>100 feet	>100 feet
1H	Southwest of Western Array	>100 feet	>100 feet	>100 feet
2H	Southwest of Western Array	>100 feet	>100 feet	>100 feet
J	South of Western Array	>100 feet	>100 feet	>100 feet
K	South of Western Array	>100 feet	>100 feet	>100 feet
L	South of Western Array	>100 feet	>100 feet	>100 feet
M	South of Western Array	>100 feet	>100 feet	>100 feet

O	Southwest of Western Array	>100 feet	>100 feet	>100 feet
X	Southwest of Western Array	>100 feet	>100 feet	>100 feet

*The fence would be less than 100 feet from this wetland to accommodate a stormwater basin, but the solar panels would be at least 100 feet from this wetland.

(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #174; SRNS 1, Attachment A, Drawing PV-100; SRNS 1, pp. 8, 11)

169. A comparison of wetland impact areas for the project configurations is listed below.

Wetland Culvert Location	Original Project Wetland Impact Areas in Square Feet	Revised Project Wetland Impact Areas in Square Feet	Modified Project Wetland Impact Areas in Square Feet
Wetland A-2* (Culvert 1)	1,136	628	N/A
Wetland B-2* (Culvert 2)	257	N/A	N/A
Wetland B/1B (Culvert 3)	2,334	2,092	2,092
Wetland A/1A (Culvert 4)	279	0	0
Total	4,006	2,720	2,092

*Wetlands A-2 and B-2 are located north of Providence New London Turnpike.

(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #178; SRNS 3, response 17)

Vernal Pools

170. Vernal pool habitat surveys were performed during April 2017, April 2018 and April 2019. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #179)

171. Eleven vernal pools were identified and are listed in the table below.

Vernal Pools (VP)	Location
VP-1*	Wetland A-2
VP-C	Wetland C
VP-E	Wetland E
VP-3E	Wetland 3E
VP-G	Wetland C
VP-H	Wetland H

VP-1H	Wetland 1H
VP-I	Wetland I
VP-L	Wetland L
VP-N	Wetland N
VP-O	Wetland O

*VP-1 is located on the Northern Parcel which is not associated with the Modified Project.

(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #180; SRNS 1, Attachment A, Drawing PV-100)

- 172. The Modified Project would not impact the VPEs of any vernal pools. (SRNS 3, response 19)
- 173. For the Modified Project, all but three vernal pools would have less than 25 percent post-construction development of the 100-foot to 750-foot Critical Terrestrial Habitat (CTH) areas. The percent post-construction development areas of the CTHs for VP-E, VP-C, and VP-I would exceed 25 percent for the Modified Project. However, directional corridors and optimal CTH habitat for these three pools would be conserved. (SRNS 3, response 19)
- 174. The Modified Project would be consistent with the 2015 U.S. Army Corps of Engineers New England District’s Vernal Pool Best Management Practices. (SRNS 3, response 18)

Visibility

- 175. The solar panels are designed to absorb incoming solar radiation and minimize reflectivity. A small percentage of incidental light would be reflected off the panels. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #185)
- 176. A majority of the project would be shielded from view due to existing landscaping and topography. (Tr. 1, pp. 34-35)
- 177. There are no scenic roads proximate to the site. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #187)
- 178. There are no nearby hiking trails that would serve as potential visual observation points for the project. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #188)
- 179. The nearest parcel used for publicly accessible recreational purposes is Samuel Cote Preserve (SCP) located south of Route 216 and about 0.9 mile from the limits of disturbance of the Modified Project. The Modified Project would not be visible from SCP. (SRNS 3, response 21)
- 180. Most of the project would be set back from adjoining roadways and behind vegetative buffers. (Tr. 1, p. 36)
- 181. Approximately four homes would have year-round views of some portion of the solar arrays based on the Modified Project. However, due to visual screening/mitigation proposed for 476 Providence New London Turnpike, this number would effectively be reduced to a total of three homes. This is also a reduction from a total of seven homes based on the Revised Project. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #193; Tr. 1, p. 72)

182. SRNS reached out to abutters regarding the Modified Project in addition to hosting the November 30, 2021 formal presentation of the Modified Project to the Town's Board of Selectman and the public. (SNRS 1, p. 5; Tr. 1, pp. 33-34)
183. SRNS has been in discussions with the abutter at 476 Providence New London Turnpike. No other abutters have requested to meet with or have further discussions with SRNS regarding the Modified Project. (Tr. 1, pp. 33-34)
184. SRNS initially proposed to install a six-foot tall roughly 470-foot long wood stockade fence at the site to provide visual screening from 476 Providence New London Turnpike. Upon further discussions with the property owner, SNRS would increase the length of the fence by another 170 feet (for a total of about 640 feet) and increase the fence height to eight feet for additional screening. The wooden fence would be installed on the outside of the chain link security fence, and the additional wooden fence height would serve to block the views of the chain link security fence. (Tr. 1, pp. 34-36)

Historic and Archaeological Resources

185. An Archeological Sensitivity Assessment (ASA) was prepared for the site in June 2019. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #199)
186. North Stonington Village Historic District (NSVHD) was identified in the ASA as listed on the State Register of Historic Places (SRHP). NSVHD is located approximately 3 miles west of the proposed site. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #200)
187. Remnant stone walls are located within several wooded areas of the proposed site. Stone walls and piles would be removed as part of the clearing the site preparation process. Stone walls and piles located outside of the project fence lines would be maintained to the fullest extent possible. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #201)
188. SRNS is exploring the possibility of reconstructing existing stone walls and/or constructing new stone walls using material from on-site to further mitigate views of the facility. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #202)
189. The ASA identified approximately 57 acres that possess moderate to high sensitivity for containing archaeological resources and recommended that such areas be subjected to subsurface testing via shovel tests. A Phase I Reconnaissance Survey (Phase I Survey) was performed. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #203)
190. The Phase I Survey Report dated November 2020 indicates a total of 202 test pits were excavated within the project area. The yielded materials are identified as field debris and are not consistent with a potentially significant archaeological site; therefore, no additional surveys were recommended. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #204)
191. By letter dated December 28, 2020, SHPO determined that the low density scatter of common historic artifacts is not eligible for listing in the NRHP; no additional testing of the project area is warranted; and no historic properties would be affected by the solar facility. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #205)

192. A small cemetery is located in the westerly portion of the site. SRNS would maintain a 100-foot buffer between the project development area and the cemetery to avoid impacts to the cemetery. SRNS had consulted with SHPO regarding the proposed 100-foot buffer, and SHPO agreed that it would be sufficient. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #206)
193. Old Route 184 traverses the Northern Parcels and connects to Stillman Road. Parallel stone walls mark the former route of Stillman Road before it was truncated. The Town indicated an interest in purchasing the Northern Parcels. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #207)

Wildlife

194. SRNS performed an amphibian breeding season field survey during 2017 through 2020. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #210)
195. SRNS performed a survey for state-listed plant species in November 2018. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #211)
196. SRNS' eastern spadefoot surveys were performed in the second half of 2021. A final report was issued in November 2021. No eastern spadefoots were detected on the subject property. Although suitable habitat exists in the southern portion of the subject property, that area is inundated with invasive species such as autumn olive and multiflora rose. The presence of invasive species reduces the availability of suitable habitat. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #212; DEEP NDDDB Determination dated March 7, 2022)
197. The March 7, 2022 Final NDDDB Determination indicated 21 state-listed species occur on or near the site and includes two bat species, four reptile species, one amphibian species, one fish species, one freshwater mussel species, one insect species and 11 plant species. (DEEP NDDDB Determination dated March 7, 2022)
198. Based on field surveys for these species that were submitted to DEEP on November 24, 2021, DEEP recommended mitigation measures to reduce potential impacts to the state-listed species, including, but not limited to, the following:
- a) Protection measures for one plant that includes population delineation, clearing and work procedure restrictions, and site monitoring;
 - b) Maintain a 100-foot vernal pool buffer around the 11 vernal pools occurring at the site;
 - c) Maintain a 50 to 100-foot upland buffer to all other wetlands occurring at the site;
 - d) Conduct tree-clearing between August 15th through April 30th to protect bat species;
 - e) Develop and implement an invasive species removal plan for the southern portion of the site to enhance habitat for the eastern spadefoot toad, eastern box turtle, and spotted turtle; and
 - f) Implement all of the Resource Protection Measures contained within the Resources Protection Plan submitted to DEEP on November 24, 2021.
- (DEEP NDDDB Determination dated March 7, 2022; Council Administrative Notice Item No. 34, Petition 1443, Findings of Fact #208-226; Council Administrative Notice Item No. 46 – 2015 DEEP Endangered, Threatened and Special Concern Species; Tr. 1, p. 20)

Geology

199. A geotechnical engineering report (Geotech Report) dated January 25, 2021 was prepared. The Geotech Report addressed the Southern Parcels. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #227)

200. Four test borings (B-1 through B-7) and nine test pits (TP-1 through TP-9) were performed at depths ranging from 3 to 20.5 feet below existing grade. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #228)
201. Groundwater depths were measured at locations B-5, TP-5 and TP-6 and found to be 16 feet, 6 feet and 8.5 feet below grade, respectively. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #229)
202. The Geotech Report originally recommended W6x12 steel piles. However, SRNS would utilize ground screws because they would be more suitable due to the potential for rock at the site. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #230)

Agriculture

203. The statutory mission of the Governor's Council for Agricultural Development (GCAD) is to develop a statewide plan for Connecticut agriculture. In 2012, GCAD recommended DOAg create an agriculture-friendly energy policy that include, but are not limited to, on-farm energy production to reduce costs and supplement farm income, agricultural net metering for power production and transmission, and qualification of agricultural anaerobic digestion projects for zero-emissions renewable energy credits ZRECs. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #231)
204. Agriculture in Connecticut is likely to be adversely impacted by climate change. It is most affected by changes in temperature and both the abundance and lack of precipitation. The top five most imperiled agricultural products are maple syrup, dairy, warm weather produce, shellfish and apple and pear production, but there are opportunities for production expansion with the future climate, including, but not limited to, biofuel crops, witch hazel and grapes. (Council Administrative Notice Item No. 58 – Climate Change Preparedness Plan)
205. Adaptation strategies for climate change impacts to agriculture include promotion of policies to reduce energy use, conserve water and encourage sustainability. (Council Administrative Notice Item No. 58 – Climate Change Preparedness Plan)
206. The proposed project would not qualify under Connecticut's Agricultural Virtual Net Metering Program because an agricultural virtual net metering facility is defined under CGS §16-244u(a)(7)(B) as having a nameplate capacity rating of 3 MW or less. (CGS §16-244u(a)(7)(B))
207. With the project limits of disturbance, approximately 0.5-acre is located on Prime Farmland Soils. The Prime Farmland Soils impact area would remain approximately the same for the Original Project, the Revised Project and the Modified Project. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #235; Tr. 1, p. 37)
208. SRNS would implement an Adaptive Multi-Paddock sheep grazing program as the lead vegetation control measure at the solar facility. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #236; Tr. 1, pp. 59-60)
209. Sheep grazing is not an integral part of the project, but it would reduce the need for motorized landscaping vehicles and thus would lower operational costs. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #237)

- 210. SRNS has consulted with American Solar Grazing Association, a nonprofit organization with a network of interested sheep farmers in Connecticut. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #238)
- 211. Sheep could be located on site during the months of June through October. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #239)
- 212. The sheep would be rotated through various array area and/or subdivided array areas. The sheep would not spend more than three days in any particular array area or subdivided array area. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #240)
- 213. SRNS has not yet finalized specifically which of the array areas would host sheep. For example, due to the proximity of the dog pound, SRNS could avoid hosting sheep at the Eastern Area Area. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #241)
- 214. SRNS has not yet contacted the United States Department of Agriculture Natural Resource Conservation Service regarding an appropriate quantity of sheep per acre of area. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #242)
- 215. If a fire were to occur while sheep are present at the site, the rancher or Petitioner’s contractor/employee (depending on who is available on-site first) would move the sheep if it is safe for such personnel to do so. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #243)
- 216. The solar facility would utilize a regionally appropriate and diverse seed mix that would provide soil stabilization, achieve habitat and pollinator goals and would facilitate hosting livestock. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #244)

Forest and Parks

- 217. There are no core forests in the Modified Project area. (Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #245; Tr. 1, p. 26)
- 218. Core forest impact areas by project configuration are listed below.

Original Project	Revised Project	Modified Project (proposed)
3.51 acres	0.2-acre	0 acres

(Council Administrative Notice Item No. 34, Petition 1443, Finding of Fact #246; Tr. 1, p. 26)

Costs

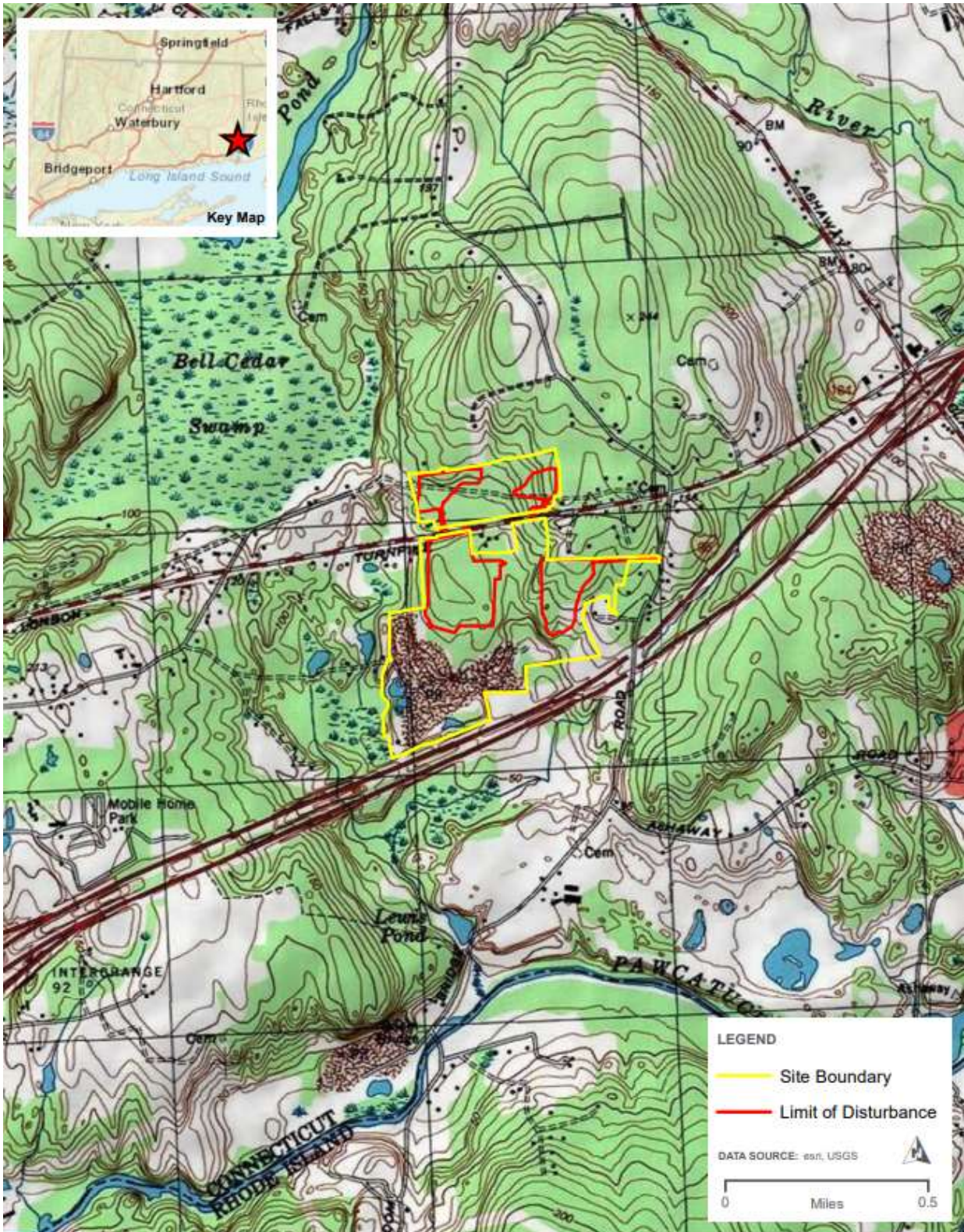
- 219. The total cost of the Modified Project is estimated between \$12 million and \$25 million, including project development costs, land acquisition and grid improvements. This is comparable to the costs of the Original Project or the Revised Project. While the Modified Project is smaller relative to the Original Project or the Revised Project, the costs of the Modified Project remain comparable due to recent market fluctuations and increased costs related to supply chain issues. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #247; SRNS 3, response 3)
- 220. Use of bifacial, higher wattage solar panels increased the total cost of the project. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #248)

221. Undergrounding the electrical interconnection would increase project costs. SRNS contacted Eversource about the cost for undergrounding the electrical interconnection. (Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact #249)

Neighborhood Concerns

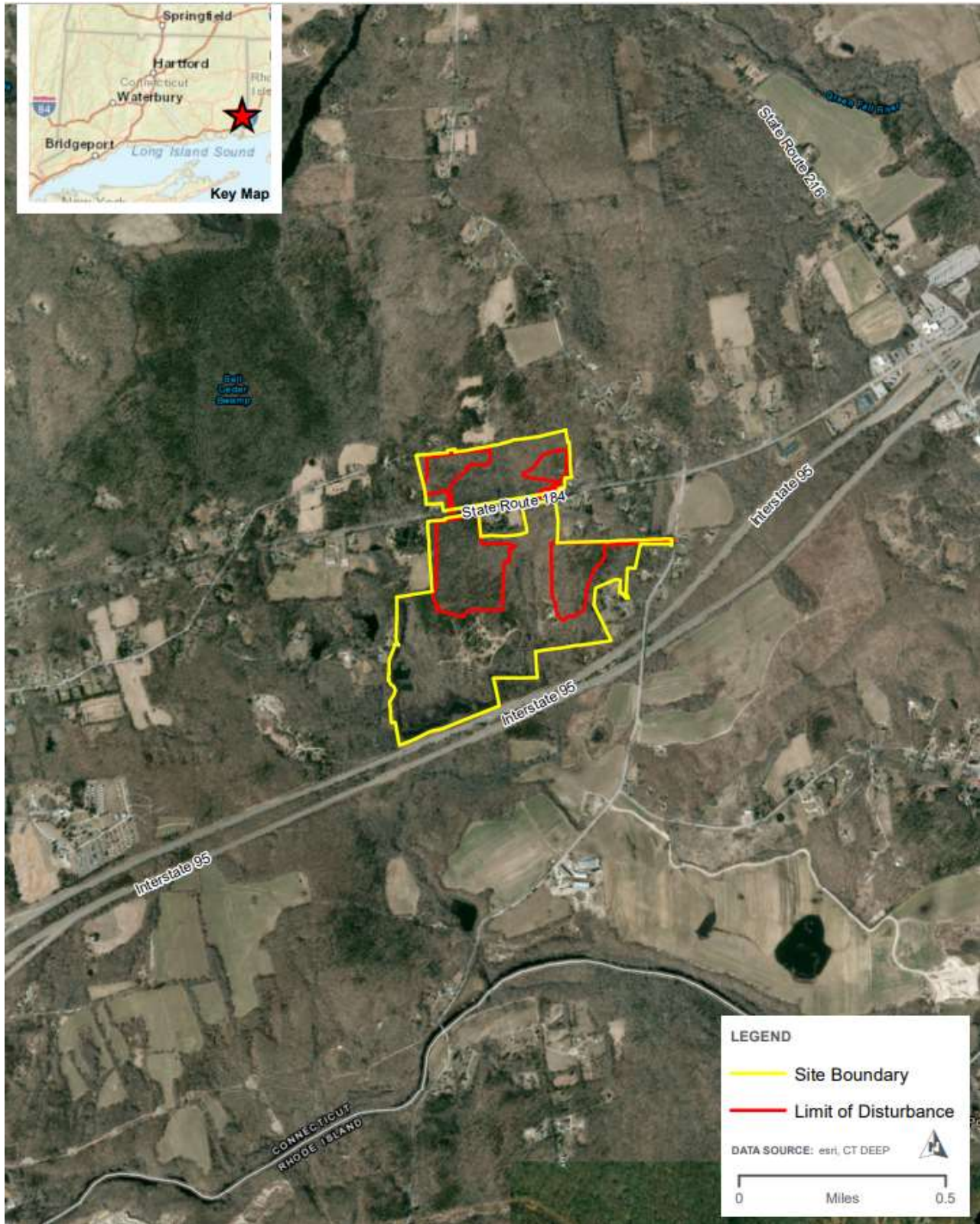
222. Under CGS § 16-50p, the Council is not obligated to take into account the status of property values. (CGS §16-50p; Tr. 4, pp. 6-7; *Westport v. Conn. Siting Council*, 47 Conn. Supp. 382 (2001), *affirmed*, 260 Conn. 266 (2002); *Goldfisher v. Conn. Siting Council*, 2005 Conn. Super. LEXIS 306 (2005), *affirmed*, 95 Conn. App. 193 (2006))
223. Pursuant to CGS § 16-50m, the Council, after giving due notice thereof, held a remote public comment hearing session on February 15, 2022 at 6:30 p.m. via Zoom conferencing. (Record; Tr. 2, p. 100)
224. One member of the public signed up to speak, but did not appear at the public comment session. (Tr. 2)
225. The Council received 6 written limited appearance statements regarding the project. (Record)

Figure 1 – Original Site Location



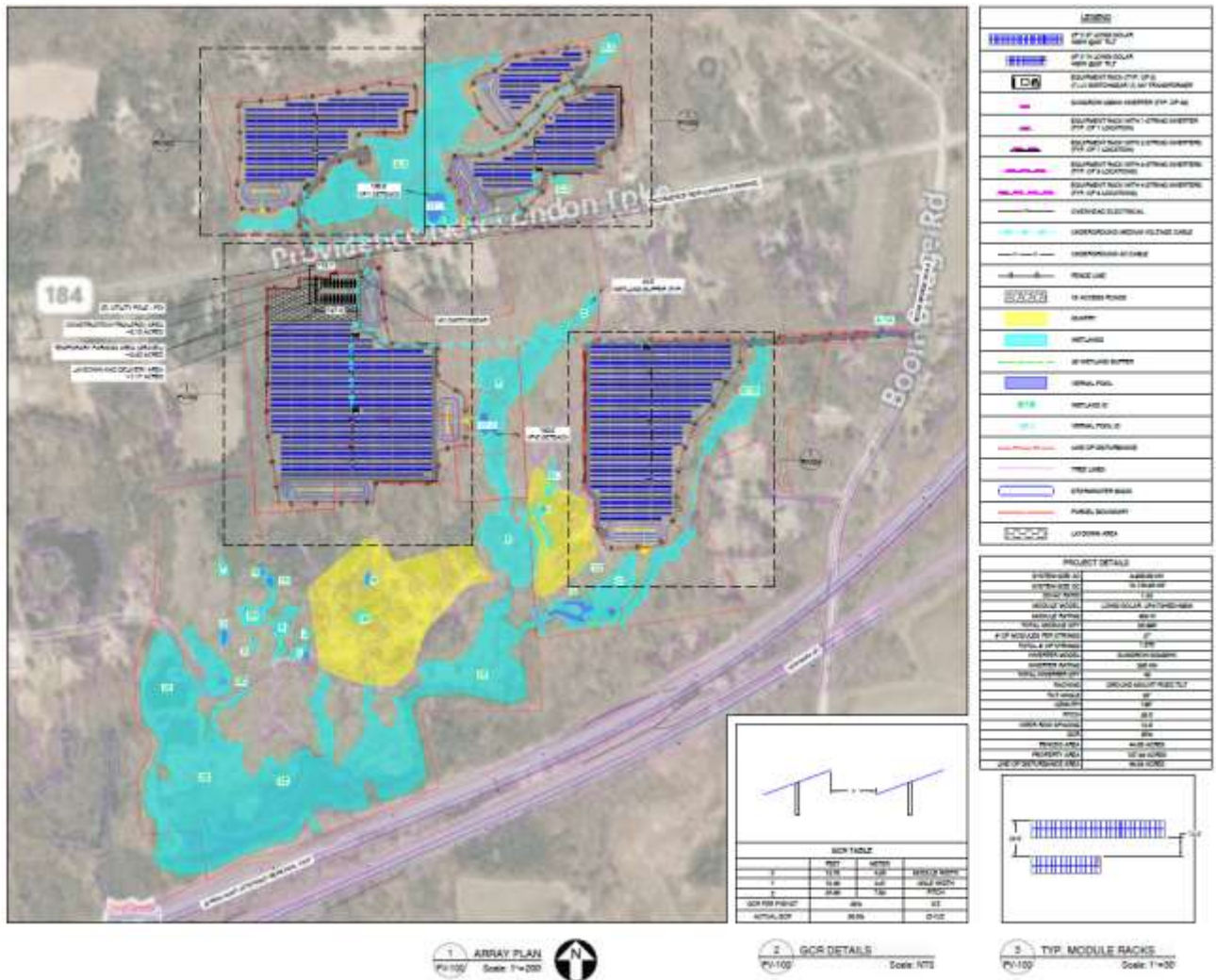
(Council Administrative Notice Item No. 34 – Petition 1443, Findings of Fact, Figure 1)

Figure 2- Existing Conditions



(Council Administrative Notice Item No. 34 – Petition 1443, Findings of Fact, Figure 2)

Figure 3 – Original Project



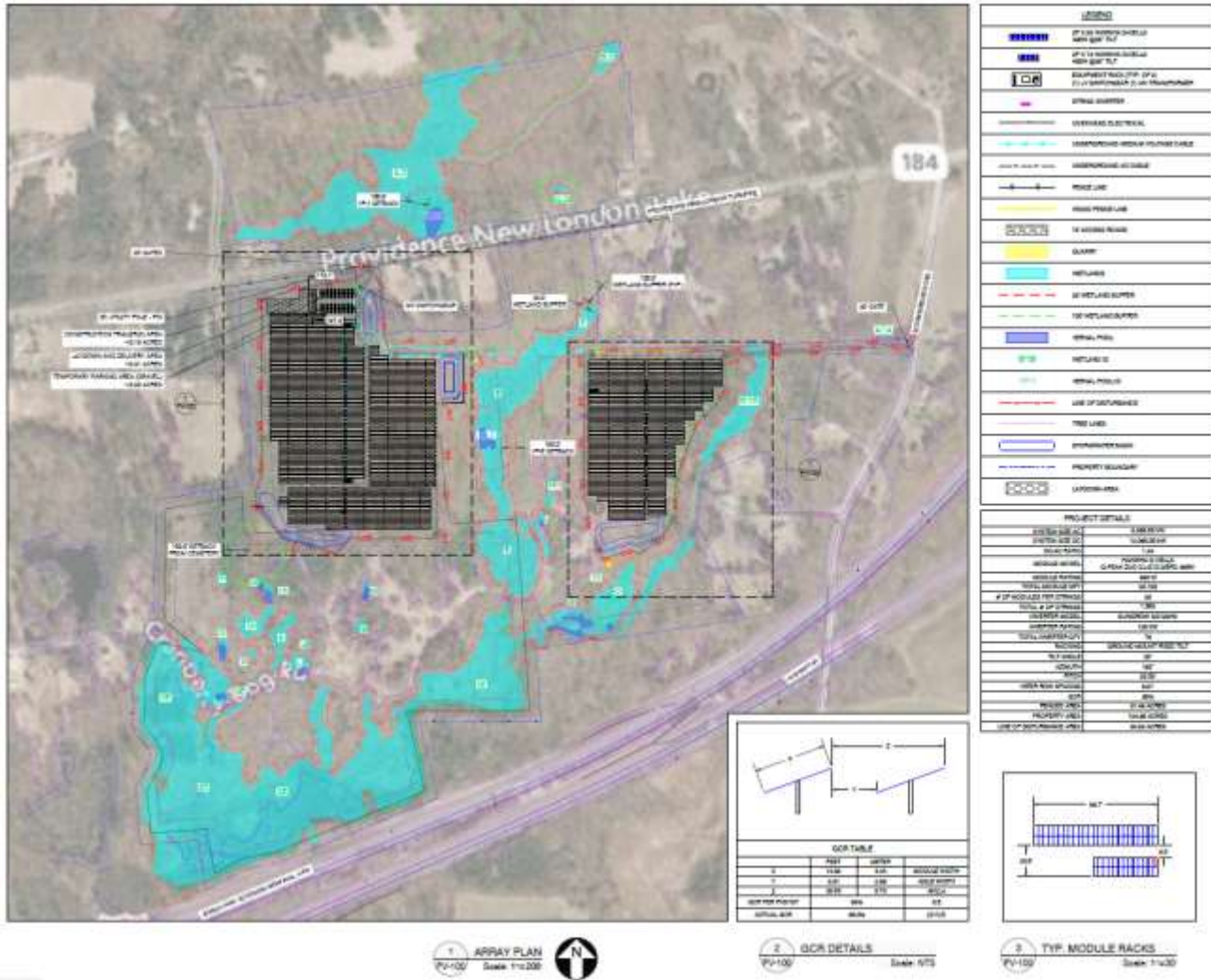
(Council Administrative Notice Item No. 34 – Petition 1443, Finding of Fact, Figure 3)

Figure 5 – Modified Project (in red) as Compared to Revised Project (in blue)



(SRNS 1, Attachment C – Comparison Map)

Figure 6 – Modified Project (proposed)



(SRNS 1, Attachment A, Drawing PV-100)