

DRAFT

Petition No. 1516
Connecticut Green Bank and CEFIA Holdings, LLC
Enfield & Willard Correctional Institutions Solar Facility
289 and 391 Shaker Road, Enfield, Connecticut

Staff Report
August 12, 2022

Introduction

On May 20, 2022, the Connecticut Siting Council (Council) received a petition from the Connecticut Green Bank, a state quasi-public agency, and CEFIA Holdings, LLC, a wholly owned subsidiary of the Green Bank, (Petitioners), for a declaratory ruling pursuant to Connecticut General Statutes (CGS) §4-176 and §16-50k for the construction, operation and maintenance of a 1.17-megawatt alternating current (AC) solar photovoltaic electric generating facility located at the Enfield & Willard Correctional Institutions (EWCI)¹ at 289 and 391 Shaker Road, Enfield, Connecticut, and associated electrical interconnection (Petition or Project).

Pursuant to Regulations of Connecticut State Agencies (RCSA) §16-50j-40 on or about May 10, 2022, Petitioners notified the abutting property owners, Town of Enfield (Town) officials, Town of Somers² officials, state officials and agencies of the proposed Project. No comments were received.

The Council issued interrogatories to Petitioners on June 14, 2022. Petitioners submitted responses to the Council's interrogatories on July 6, 2022. Given security concerns and restricted access associated with the correctional institution property that necessitate state Department of Correction (DOC) supervision, Petitioners were unable to submit additional photographic documentation of the proposed Project site beyond the photographic documentation within the Petition, which serves as a "virtual" field review of the Project.

Pursuant to CGS §4-176(e) of the Uniform Administrative Procedure Act, an administrative agency is required to take an action on a petition for a declaratory ruling within 60 days of receipt. On July 7, 2022, pursuant to CGS §4-176(e), the Council voted to set the date by which to render a decision on the Petition as no later than November 16, 2022, which is the 180-day statutory deadline for a final decision under CGS §4-176(i).

Connecticut Environmental Policy Act

The purpose of the Connecticut Environmental Policy Act (CEPoA) is to improve and coordinate the environmental plans, functions, powers and programs of the state. It requires, "each state department, institution or agency responsible for the primary recommendation or initiation of actions which may significantly affect the environment shall in the case of each such proposed action make a detailed written evaluation of its environmental impact before deciding whether to undertake or approve such action."³ Actions which may significantly affect the environment include activities undertaken by state departments, institutions or agencies, funded in whole or in part by the state, which could have an impact on environmental resources.⁴ The Department of Administrative Services (DAS) is the sponsoring state agency of the proposed Project under CEPoA.

¹ The host parcel of the proposed solar facility site is owned by the state. The correctional facilities on the host parcel are operated by the state Department of Correction.

² The Town of Somers is located within 2,500 feet of the proposed facility site.

³ Conn. Gen. Stat. §22a-1b(c) (2021).

⁴ Conn. Gen. Stat. §22a-1c (2021).

DAS initiated the public scoping process under CEPoLA by providing notice of the proposed Project to the Council on Environmental Quality (CEQ), the Department of Energy and Environmental Protection (DEEP), the State Historic Preservation Office (SHPO), and the Office of Policy and Management (OPM) in order to determine if an environmental impact evaluation (EIE) should be prepared for development of the proposed solar facility. In response to Petitioners' notice, DEEP commented on the Natural Diversity Database (NDDDB) determination for the Project and how the Project supports state policy goals, and SHPO requested a professional archaeological assessment and reconnaissance survey be completed prior to Project construction. Subsequently, DAS determined the proposed Project would not require an EIE. A post-scoping notice will be published within the established CEPoLA timeframe.

While the Council has discretion to consider CEPoLA, it is not required to do so as one of the functions of the Council under the Public Utility Environmental Standards Act is to protect the environment to the extent possible while satisfying the public need for adequate electrical power.”⁵

Municipal Consultation

Petitioners submitted site plans to the Town in March 2022. Petitioners attended an Inland Wetlands and Watercourses meeting on March 15, 2022 and a Planning & Zoning Commission (PZC) meeting on March 24, 2022. The PZC submitted a letter of support to Petitioners on April 27, 2022.

On May 23, 2022, the Council sent correspondence to the Town and the Town of Somers stating that the Council has received the Petition and invited the municipalities to contact the Council with any questions or comments by June 19, 2022. No comments were received.

State Agency Comments

On May 23, 2022, pursuant to RCSA §16-50j-40, the Council sent correspondence requesting comments on the proposed project from the following state agencies by June 19, 2022: DEEP; Department of Agriculture (DOAg); Department of Public Health (DPH); CEQ; Public Utilities Regulatory Authority (PURA); OPM; Department of Economic and Community Development (DECD); Department of Emergency Services and Public Protection (DESPP); Department of Consumer Protection (DCP); Department of Labor (DOL); DAS; Department of Transportation (DOT); the Connecticut Airport Authority (CAA); and SHPO.

In response to the Council's solicitation, CEQ submitted comments on June 6, 2022⁶ related to the DEEP NDDDB determination, concurrence with box turtle mitigation measures, and the potential impact to prime farmland soils and wetlands.

No other state agencies provided written comments on the Project.

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.⁷

Public Act 17-218

Effective July 1, 2017, Public Act (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,

⁵ *City of Torrington v. Conn. Siting Council*, 1991 Conn. Super. LEXIS 2084 at *35-36 (Conn. Super. Sept. 10, 1991); *City of New Haven v. Conn. Siting Council*, 2002 Conn. Super. LEXIS 2753 at *43-56 (Conn. Super. Aug. 21, 2002).

⁶ [pe 1516 CEQ comments 06/06/22](#)

⁷ *Corcoran v. Connecticut Siting Council*, 284 Conn. 455 (2007).

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.”

The proposed facility has a generating capacity of 1.17 MW; therefore, it is exempt from the provisions of PA 17-218.

Public Benefit

The Project would be a customer-side 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.” The 2018 Comprehensive Energy Strategy (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.” Furthermore, on September 3, 2019, Governor Lamont issued Executive Order No. 3, which calls for the complete de-carbonization of the electric sector by 2040. The proposed facility will contribute to fulfilling the State’s Renewable Portfolio Standard and Global Warming Solutions Act as a zero emission Class I renewable energy source.

Pursuant to Governor Lamont’s Executive Order No. 21-03, which directs all electricity purchased and generated by the Executive Branch to be 100% zero carbon by 2030, primarily through new projects sited on state buildings or property, the Petitioners entered into a 25-year Power Purchase Agreement with DAS to produce solar-generated electricity solely for use at EWCI.

Proposed Site

Pursuant to a lease agreement with DAS, Petitioners propose to construct the solar facility on an approximate 4.4-acre site⁸ within a 371-acre parcel located at 289 and 391 Shaker Road in Enfield. The host parcel, zoned Residential R-88, is improved with several buildings comprising EWCI. The Enfield Correctional Institution is located north of the proposed site. The Willard Correctional Institution is located east of the proposed site. Some buildings associated with the Robinson Correctional Institution are located on the EWCI parcel north of the proposed site and are referred to as Robinson A and Robinson B.⁹

The Project would be located in a hayfield in the southern portion of the parcel. The site slopes downgradient to the south from an elevation of 295 feet above mean sea level (amsl) to 262 feet amsl.

Land use surrounding the site beyond the correctional institution parcel consists of undeveloped woodland, agricultural, commercial and other DOC-operated facilities. There are no residentially developed properties within 1,000 feet of the site.

Petitioners selected the site due to state ownership, availability, limited environmental impact, suitability, and proximity to an electrical interconnection.

The term of the lease agreement is 25 years. At the end of the lease, Petitioners must decommission the Project and restore the site to its pre-existing condition.

⁸ 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.

⁹ Other buildings associated with the Robinson Correctional Institution are located across Taylor Road to the west of the proposed site.

Proposed Project

The output of the proposed facility would be distributed among four independent systems to serve four buildings at four separate interconnection points as follows:

1. Willard Correctional Institution;
2. Enfield Correctional Institution;
3. Robinson A; and
4. Robinson B.

Refer to Proposed Conditions aerial photograph.

The solar array consists of 2,990 solar panels rated at 465/480 Watts. The panels would be installed on a fixed racking system facing south at a 25-degree angle. The panels would be approximately 10 feet above grade at the highest point and 2 feet above grade at the lowest point. The aisles between the panel rows would be approximately 16.6 feet wide.

Panel row wiring would extend along the racking system to reduce potential damage from weather events, maintenance activities, or animals. From collection points at the end of the panel rows, underground wiring would extend to the inverters and switchgear/transformer pads on the east side, north side and west side of the site.

From the western electrical pad, two underground interconnection lines would extend north for 1,700 feet through lawn and paved areas to Robinson A and Robinson B. From the northern electrical pad, an underground line would extend for approximately 700 feet through lawn and paved areas to the Enfield Correctional Institution. From the eastern electrical pad, an underground interconnection line would extend across a paved driveway, then transition to an overhead line extending 1,600 feet through a field and around a secured area to the Willard Correctional Institution. The overhead line would be supported on nine utility poles.

The capacity factor for the Project is approximately 19.4 percent. The power output would decline over time with an anticipated annual power output loss of approximately 0.5 percent.

A seven-foot tall chain link fence with an 8-inch gap between the mesh and the ground to allow for small wildlife movement would enclose the facility. Access to the solar facility would be directly from an existing driveway on the host parcel to a fenced access gate.

Approximately 1,060 cubic yards of excavation is required at the site for installation of a stormwater control basin. The site development area consists of 5 to 10 percent grades. The solar racking system would be installed on existing grades.

Construction would occur over a 4 to 6 month period. Typical construction hours and workdays of the week are as follows: Monday – Saturday, 7:00 AM to 7:00 PM.

The estimated cost of the project is approximately \$2.6 million.

Public Safety

The proposed Project would comply with the National Electrical Code (NEC), National Electrical Safety Code and National Fire Protection Association codes and standards, as applicable. Petitioners designed the system in accordance with the CT State Fire Prevention Code, Section 11.12.3 - Ground Mounted Photovoltaic System

Installations by including a 15-foot wide perimeter access aisle around each array and seeding the solar array areas with low growing vegetation.

According to correspondence from the Federal Aviation Administration (FAA) dated March 23, 2022, the Project would not be a Hazard to Air Navigation or require a FAA glare analysis.

The facility would be remotely monitored through a data acquisition system.

Petitioners would provide local emergency responders with facility operation and safety training.

The seven-foot high chain link perimeter fence complies with the NEC fencing requirements.¹⁰

The proposed facility would be in compliance with DEEP Noise Control Standards. Noise modeling indicates noise from the Project would be less than 27 dBA at the abutting property lines. The inverters do not operate at night. Construction noise is exempt from DEEP Noise Control Standards.

The site is not located within a Federal Emergency Management Agency designated 100-year or 500-year flood zone.

Environmental Effects and Mitigation Measures

Historic and Recreational Resources

SHPO submitted correspondence to the Petitioner on June 27, 2022, indicating that the proposed project would not affect historic properties or archeological resources. No further action was recommended.

There are no public recreation resources within 1,500 feet of the site.

Visibility

The facility would be visible from Shaker Road and agricultural land to the south. The facility perimeter fence is approximately 230 feet from Shaker Road at its closest point. No landscaping is proposed. Areas to the north, east and west would be screened by existing buildings and vegetation on DOC property.

No state designated scenic roads or scenic areas are located adjacent to the site.

Agriculture

The host parcel contains prime farmland soils according to mapping maintained by the United States Department of Agriculture (USDA) Natural Resource Conservation Service. Under PA 17-218, “prime farmland” means land that meets the criteria for prime farmland as described in 7 Code of Federal Regulations (C.F.R.) 657, as amended from time to time. 7 C.F.R. 657 defines prime farmland in relevant part as “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.”

¹⁰ Section 691.4(2) of the National Electrical Code (NEC), 2020 Edition notes that, “Access to PV electric supply stations shall be restricted by fencing or other adequate means in accordance with 110.31...” Section 110.31 notes that for over 1,000 Volts, “...a wall, screen, or fence shall be used...A fence shall not be less than 7 feet in height or a combination of 6 feet or more of fence fabric and a 1 foot or more...utilizing barbed wire or equivalent.”

The site is located on a hayfield and would be constructed on approximately 340 square feet of prime farmland soil. The Petitioners would minimize grading to the extent feasible to avoid disturbance to the prime farmland soil.

Agricultural use of the site could resume once the Project is decommissioned.

Wetlands and Watercourses

Petitioners performed a wetland and watercourse survey in the Project area in September and October 2021. Two isolated wetlands were identified within the existing hayfield; one to the north and one to the south of the proposed array. The northern wetland is located at the pipe discharge from a parking lot drainage system. The southern wetland appears to be where groundwater comes close to the surface. Two other wetlands are located along the route of the overhead interconnection line that extends to the Willard Correctional Institution.

During construction of the solar array, Petitioners would maintain a 50-foot buffer from the limit of disturbance to the hayfield wetland areas. Post construction, the solar panels would be 100 feet from the hayfield wetland areas. The 50-foot wetland construction buffer and 100-foot wetland solar panel buffer are consistent with the DEEP General Permit for the Discharge of Stormwater and Dewatering Wastewaters from Construction Activities (General Permit).

The overhead line through the hayfield traverses a wetland area. Petitioners would use temporary matting to install the line and one utility pole in the hayfield wetland to reduce disturbance to wetland soils. Two additional utility poles would be installed along the edge of wetland adjacent to an existing security fence associated with the Willard Correctional Institution.

Wildlife

On August 3, 2020, DEEP issued a NDDB Preliminary Assessment letter that identified 24 species that occur at or near the site including three plants, four birds, one reptile, and 16 invertebrates. Petitioners conducted field surveys of the site to determine if suitable habitat for the listed species is present in the construction areas. The surveys determined that suitable habitat may exist within the construction areas to support the eastern box turtle, savannah sparrow, bobolink, and a carabid beetle species. The overhead interconnection line adjacent to the north and east side of the Willard Correctional Institution would be constructed in a lawn area adjacent to shrubland habitat for the alder flycatcher.

The survey report did not recommend mitigation measures for the listed grassland bird species as the hayfield is routinely mowed which would prevent successful nesting. The survey reported noted a grassland/shrubland preservation area on DOC property approximately 750 feet northeast of the site that provides habitat for the listed bird species.

The survey report recommended mitigation measures for the beetle that include covering any exposed sandy surfaces with straw to prevent beetles from using these areas as habitat. The survey report recommended mitigation measures for the eastern box turtle that include, but are not limited to, isolation measures, turtle “sweeps”, contractor education, and reporting. Petitioners included turtle protection measures on the Project Site Plans and would revise the measures as necessary. Some trimming of shrubs would occur along the edge of alder flycatcher habitat and any effect on this species would be temporary.

Petitioners sent the results of the habitat survey to DEEP on April 25, 2022 for review. A Final NDDB Determination letter was issued on August 3, 2022 that included best management protocols to reduce potential impacts to grassland birds and the eastern box turtle.

Petitioners would use a pollinator seed mix to revegetate disturbed areas within the solar array and in the stormwater basins. Petitioners would prefer to use a seed mix for areas alongside utility trenching that will blend in with the existing lawn areas.

Forest

There would be no tree clearing associated with the Project.

Air Quality

The Project would not produce air or water emissions as a result of operation. The Project would not produce emissions of regulated air pollutants or greenhouse gases during operation.

Water Quality

The site is not located within a DEEP-designated Aquifer Protection Area (APA). The nearest APA is located approximately 8,600 feet west of the site. No Public Drinking Supply Watersheds are proximate to the proposed site.

A Fuel Spill Prevention Plan has been developed for the Project to protect subsurface water resources.

The facility would not use or discharge water during site operations.

Stormwater

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. The DEEP 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 project after construction is complete.

A DEEP-issued General Permit is required prior to commencement of construction activities, as defined in the General Permit. The General Permit and associated SWPCP incorporates project designs consistent with the 2002 *Connecticut Guidelines for Soil Erosion and Sediment Control* and the 2004 *Connecticut Stormwater Quality Manual*.

A construction sequence is noted on the Project Site Plans that includes the establishment of erosion control measures, site clearing and construction and installation of the stormwater management system. Once the disturbed areas are stabilized, installation of site infrastructure would commence.

Petitioners met with the DEEP Stormwater Division on February 1, 2022 to discuss the Project. Petitioners performed a stormwater analysis that concluded two stormwater basins would be required to retain post-construction stormwater flows.

Operation and Maintenance

A post-construction Operations and Maintenance (O&M) Plan has been developed that includes provisions for periodic inspections of physical site features and structural and electrical components.

An evaluation of the facility and performance of preventative maintenance measures would be conducted in accordance with manufacturer's specifications. The evaluation would include the electrical

system/components, physical infrastructure, and site vegetation. Replacement modules would not be stored on-site.

Due to frequent rain events, module cleaning is not anticipated. Mowing and herbicidal applications would be conducted as required and/or permitted.

Decommissioning

The Project has a minimal operational life of 25 years. At the end of the Project's useful life, it would be decommissioned and the site restored to its original condition. Project decommissioning would include removal and disposal or recycling of all above-surface and subsurface Project components.

All recyclable materials would be transported to appropriate recycling facilities. It is anticipated that the glass, aluminum frame, copper wire, and plastic junction box are all recyclable components of solar modules. One available PV recycling center, Cascade Eco Minerals, is located in Natrona Heights, Pennsylvania.

Any non-recyclable materials will be properly disposed of at a nearby landfill. The transformer and interconnection equipment pads would be removed. Underground infrastructure would be removed to a depth of three feet.

Disturbed areas would be backfilled with native soil, stabilized and seeded for re-use as a hayfield.

The selected solar panels for the Project meet current Toxicity Characteristic Leaching Procedure (TCLP) criteria for characterization as nonhazardous waste in the event the solar panels are not recycled at the end of the Project's life.

Conclusion

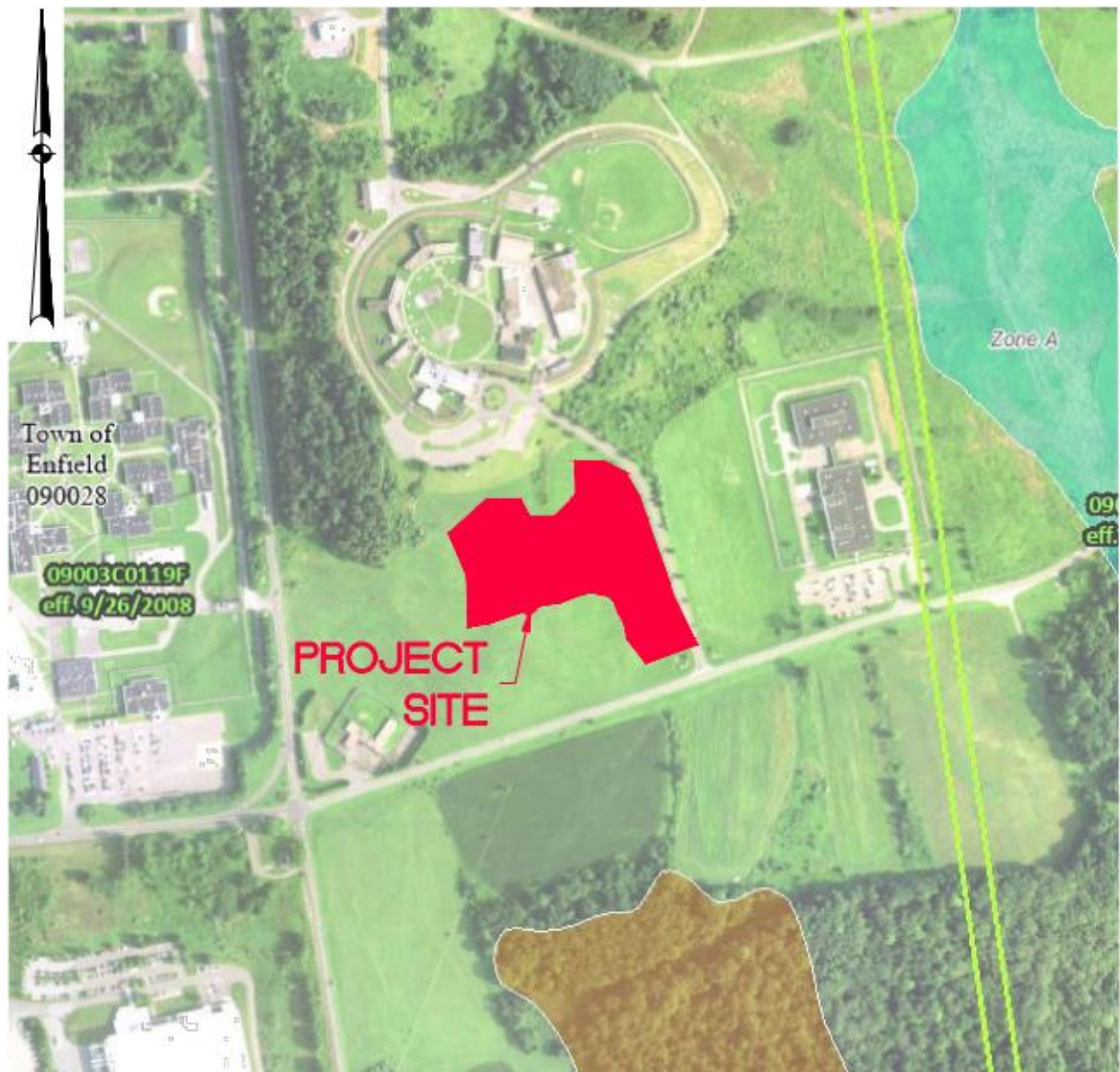
The Project is a customer side distributed energy resource with a capacity of not more than sixty-five megawatts, meets DEEP air and water quality standards, and would not have a substantial adverse environmental effect. The proposed project will not produce air emissions, will not utilize water to produce electricity, was designed to minimize environmental impacts, and furthers the State's energy policy by developing and utilizing renewable energy resources and distributed energy resources. Furthermore, the Project was developed in support of Governor Lamont's Executive Order No. 21-03, which directs electricity purchased and generated by the Executive Branch to be from 100% zero carbon sources by 2030.

Recommendations

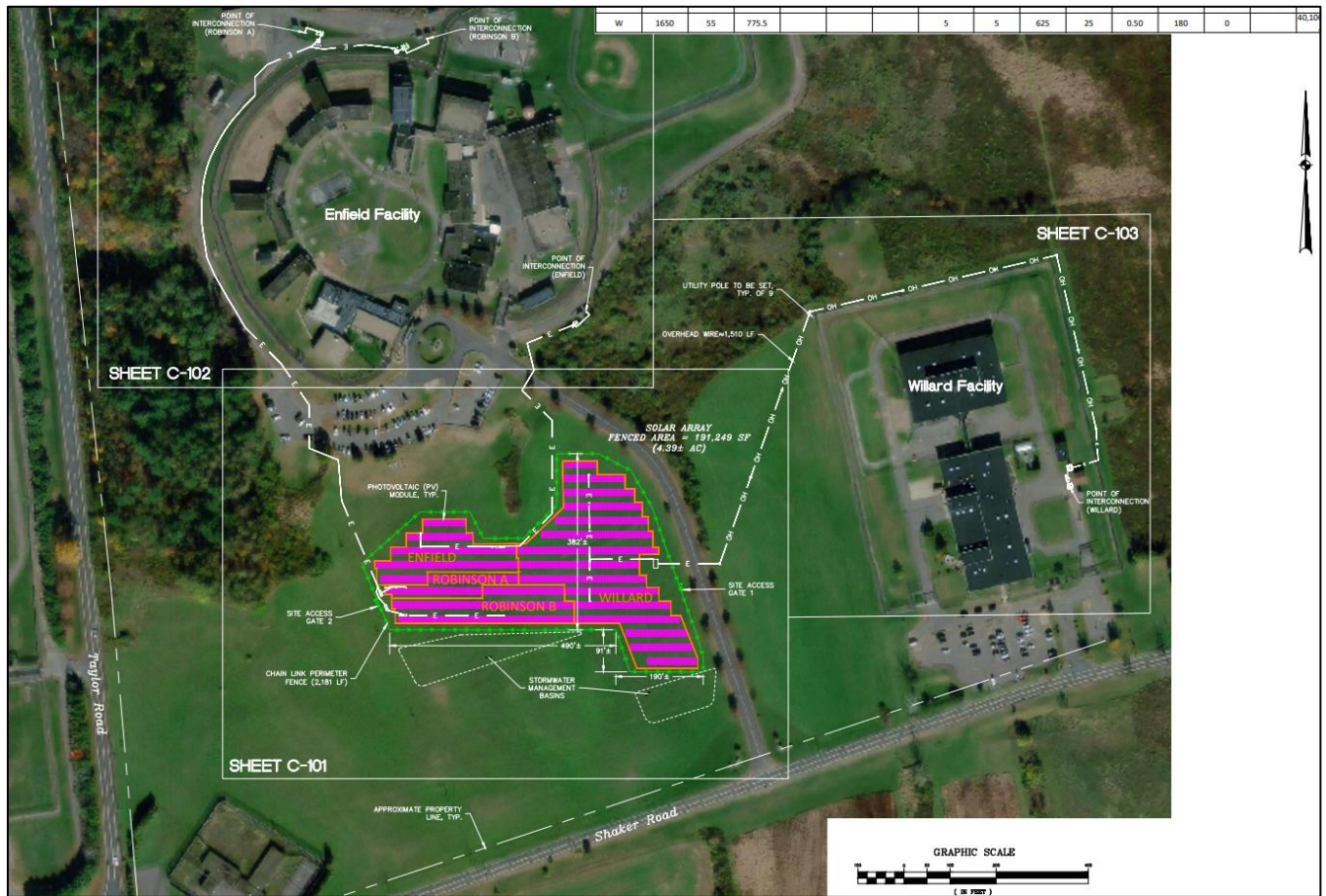
If approved, staff recommends the following conditions:

1. Approval of any project changes be delegated to Council staff;
2. Submit a copy of the DEEP Stormwater Permit prior to the commencement of construction;
3. Implement the best management protocols for the eastern box turtle and grassland birds listed in the DEEP Natural Diversity Database Determination letter dated August 3, 2022;
4. Submit the final structural design for the racking system stamped by a Professional Engineer duly licensed in the State of Connecticut prior to commencement of construction;
5. Provide training to emergency responders;
6. Provide contact information for the contractor and spill response contractor assigned to the Project; and
7. Utilize a pollinator seed mix, where feasible.

Site Location



Proposed Conditions



Site Plan

