

Guy Corbosiero, Chair
Winchendon Planning Board
109 Front Street, Dept 10
Winchendon, Massachusetts 01475

March 27, 2023

RE: Site Plan Review
Solar Energy Storage System (ESS)
ZP Battery DevCo, LLC
#256 Murdock Avenue (Map 2D2/11)

Dear Mr. Corbosiero,

On behalf of our client, ZP Battery DevCo, LLC, Hannigan Engineering, Inc. is submitting an application for Site Plan Approval, and Stormwater Management Permit for the installation of a standalone solar energy storage system on land of Bostwick Realty Trust located at #256 Murdock Avenue in Winchendon, Massachusetts (Map/Parcel 2D2/11). The property is located within the Industrial District and the use is noted in Article 6.11.2.b of the Town of Winchendon Zoning Bylaw as allowed by right subject to Site Plan Review. The Storage system has an estimated capacity of 5-Megawatt AC. Submitted for this review are the application form, filing fees, the Site Development Plan, the Drainage Analysis Report, along with supporting documentation with respect to the Solar Facility Infrastructure. The Site Development Plans are being submitted in full and reduced size copy.

The property currently contains an existing industrial building with applicable gravel and paved access and parking areas. The periphery of the property is comprised of woodlands and wetland resource areas. Areas subject to protection under the Wetlands Protection Act were reviewed by LEC Environmental Consultants and are depicted on the Site Plans. These areas include Bordering Vegetated Wetlands (BVW) located along the westerly side of the property as well as a smaller area located along the easterly side, these two wetland areas are not hydraulically connected to one another. As such a filing with the Winchendon Conservation Commission is being concurrently made.

The project entails the construction of a standalone solar Energy Storage System (ESS) with an estimated capacity of approximately 5-Megawatt AC on the property. The proposed storage systems will be located along rear portion of the existing structure at the northern corner of the property. Unlike ground-mounted Solar Energy Systems that involve the generation of energy, this facility is utilized purely for the storage of energy generated from area solar systems connected to the grid.

As part of the initial site preparation, appropriate erosion control measures will be installed to prevent the transport of soils and sediments to the lower elevations of the site. The site development will consist of the installation of four (4) concrete pads on which the eight (8) ESS units will be situated. Additional electrical components and transformer pads will also be installed to allow the eventual interconnection to the grid. The electrical equipment has been isolated into a single fenced in area. The overall layout of the development has been designed to accommodate larger vehicle traffic, utilized for deliveries as well as emergency vehicles. The total area of alteration associated with the project will be approximately 25,000 square feet.

Access to the site will be provided via the existing gravel loading area utilized by the existing building which is accessible from Murdock Avenue. This access will be a 24-foot-wide gravel driveway that extends easterly into the development. The gravel driveway is intended to provide access to the site on a periodic basis for general maintenance and inspections of the facility. This loop configuration of the access drive will allow for smaller emergency vehicles or service vehicles to enter the site and drive through the site. If in the event of a larger emergency vehicle entering the area, they would utilize the loading area and access drive to gain access to the project as it is in close proximity to the building.

The entire system will be surrounded by a chain-link security fence to prevent unauthorized entry. A gate will be provided at the entrance to the site with a Knox Box to allow emergency personnel to enter if necessary. Additionally, a sign will be added at the entrance of facility with the appropriate contact information for the operator and emergency contacts. With respect to lighting, lighting operated by a motion sensor will be provided in the area of the electrical system. Should maintenance be required, it is typically performed during daylight hours.

As part of this submission, a Drainage Analysis and Report is provided to review compliance with the Stormwater Management Bylaw. Stormwater generated from a portion of the site will be captured via overland flow and transmitted to a single rain garden feature to the north of the development to mitigate increases in peak rates of runoff and provide treatment. The area immediately within the fenced area will be comprised of loose stone and gravel with the remaining areas being loamed and seeded for permanent stabilization. This rain garden will discharge runoff towards an existing drainage trunkline that is located alongside the existing building, which discharges towards the wetland along the westerly portion of the property. Currently this line is undersized for the contributing area, as part of the overall development this line will be replaced with a large diameter pipe to accommodate the anticipated flows. To provide further enhancement of the runoff, a water quality unit will be incorporated into the drainage line to treat runoff from the proposed development as well as the existing area. This will then discharge to the same location with a level spreader device to provide additional velocity mitigation. The area immediately within the fenced area will be comprised of loose stone and gravel with the remaining areas being loamed and seeded for permanent stabilization.

The utility interconnection will utilize a series of underground electrical conduits to transmit the electricity to and from the ESS including several transformers and inverters. Additional underground conduits are utilized with the interconnection through pad mounted equipment for final connect to the grid. The final design and connection location will be established by utility provider and is not under control of the applicant.

Safety and protocol surrounding the proposed ESS project are extensive. Each ESS container is equipped with sensors and monitors for heat, humidity, and gases. There are audible and visual alarms associated with these protection systems. Safety aspects beyond the automatic monitoring systems include the installation of Fire Department Connection (FDC) risers which are individually plumbed to each ESS container. These FDC's will be located outside of the security fence and will be individually labeled to the specific container to which it is connected. In the event of an emergency, the Fire Department can utilize the FDC to directly connect to the affected ESS container.

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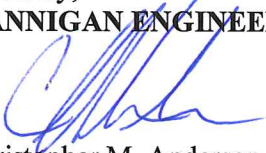
HANNIGAN ENGINEERING, INC.

8 MONUMENT SQUARE, LEOMINSTER, MA 01453 PHONE: (978) 534-1234

CIVIL ENGINEERS & LAND SURVEYORS

Hannigan Engineering, Inc. is submitting these applications along with associated filing fees for the project. We understand the project will be put on the next available agenda for the meeting open to the public. Representatives of this office and of the Applicant will be available to address any questions or concerns raised at that time. Should you require additional information prior to the meeting, please do not hesitate to contact this office. We appreciate your continued assistance in this process as we look forward to working with you to obtain the anticipated approval of this project.

Sincerely,
HANNIGAN ENGINEERING, INC



Christopher M. Anderson, PE
Project Engineer



William D. Hannigan, PE
President

pc: Pete Forte, ZP Battery DevCo,LLC
Tom Corbett, ZP Battery DevCo,LLC

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300 feet Abutters List Report

Winchendon, MA
March 27, 2023

Subject Property:

Parcel Number: 2D2-0-11
CAMA Number: 2D2-0-11
Property Address: 256 MURDOCK AV

Mailing Address: SALOOM, PETER F. + LINDA B. TR OF
BOSTWICK REALTY TRUST
256 MURDOCK AVENUE
WINCHENDON, MA 01475

Abutters:

Parcel Number: 1-0-242
CAMA Number: 1-0-242
Property Address: WINCHENDON

Mailing Address: PAN AM SOUTHERN LLC
1700 IRON HORSE PARK
NORTH BILLERICA, MA 01862-1641

Parcel Number: 2-0-77
CAMA Number: 2-0-77
Property Address: LINCOLN AV

Mailing Address: WINCHENDON REDEVELOPMENT
AUTHORITY
109 FRONT STREET
WINCHENDON, MA 01475

Parcel Number: 2D1-0-18
CAMA Number: 2D1-0-18
Property Address: 325 SCHOOL ST

Mailing Address: WINCHENDON MASONIC
325 SCHOOL ST
WINCHENDON, MA 01475

Parcel Number: 2D1-0-27
CAMA Number: 2D1-0-27
Property Address: SCHOOL ST

Mailing Address: SALOOM, PETER F. + LINDA B. TR OF
BOSTWICK REALTY TRUST
256 MURDOCK AVENUE
WINCHENDON, MA 01475

Parcel Number: 2D1-0-3
CAMA Number: 2D1-0-3
Property Address: 363 SCHOOL ST

Mailing Address: BREWER RODNEY A & JESSICA KP
363 SCHOOL STREET
WINCHENDON, MA 01475

Parcel Number: 2D2-0-12
CAMA Number: 2D2-0-12
Property Address: OFF SCHOOL ST

Mailing Address: SALOOM, PETER F. + LINDA B. TR OF
BOSTWICK REALTY TRUST
256 MURDOCK AVENUE
WINCHENDON, MA 01475

Parcel Number: 2D2-0-14
CAMA Number: 2D2-0-14
Property Address: LINCOLN AV

Mailing Address: NEW ENGLAND WOODEN WARE CORP
205 SCHOOL STREET SUITE 201
GARDNER, MA 01440

Parcel Number: 2D2-0-4
CAMA Number: 2D2-0-4
Property Address: 280 LINCOLN AV

Mailing Address: WILSON, ROLAND H. + SHIRLEY F.
WILSON, COREY DAVID
P.O. BOX 369
WINCHENDON, MA 01475

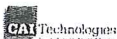
Parcel Number: 5A2-0-25
CAMA Number: 5A2-0-25
Property Address: MURDOCK AV

Mailing Address: SALOOM, PETER F. + LINDA B. TR OF
BOSTWICK REALTY TRUST
256 MURDOCK AVENUE
WINCHENDON, MA 01475

Parcel Number: 5A2-0-26
CAMA Number: 5A2-0-26
Property Address: MURDOCK AV

Mailing Address: SALOOM, PETER F. + LINDA B. TR OF
BOSTWICK REALTY TRUST
256 MURDOCK AVENUE
WINCHENDON, MA 01475

Sherrill A. DiPasquale
BOA 03-27-2023



www.cai-tech.com

3/27/2023

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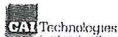
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Winchendon, MA

March 27, 2023

Parcel Number: 5A2-0-4
CAMA Number: 5A2-0-4
Property Address: SCHOOL ST

Mailing Address: EUGENE M. CONNOR POST 193, INC.
SCHOOL STREET
WINCHENDON, MA 01475



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