



March 11, 2021

George Barrett, Chair  
Town of Wareham Planning Board  
Memorial Town Hall  
54 Marion Road  
Wareham, MA 02571

Via: FedEx and Email to [kbuckland@wareham.ma.us](mailto:kbuckland@wareham.ma.us) and [sraposo@wareham.ma.us](mailto:sraposo@wareham.ma.us)

Reference: Response to Planning Board Comments  
Site Plan Review Application  
Rocky Maple Solar  
Off North Carver Road  
Wareham and Carver, Massachusetts  
B+T Project No. 3203.00

Dear Chair Barrett and Members of the Board:

On behalf of the Applicant, BE RE, LLC, Beals and Thomas, Inc. (B+T) respectfully submits this response to the Town Engineer's comments relating to the Site Plan Review Application for the Rocky Maple Solar Array (the Project) located Off North Carver Road in Wareham, Massachusetts (the Site). The comments outlined herein were provided by Charles L. Rowley on February 2, 2021.

As documentation for the Administrative record, please see the following chronology to date:

- November 11, 2020: A Pre-Filling Meeting for the Rocky Maple Solar Project was attended by Sarah Stearns (B+T) and Kenneth Buckland (Wareham Town Planner).
- December 10, 2020: A Department Head Meeting was held to discuss the Project.
- December 16, 2020: Site Plan Review Application was filed with the Wareham Planning Board.
- January 25, 2021: Planning Board Hearing (#1); opened and continued due to lack of quorum.
- February 2, 2021: Peer Review Letter (#1) issued by Charles L. Rowley.
- February 8, 2021: Planning Board (#2) hearing continued due to lack of quorum.
- February 22, 2021: Planning Board Hearing (#3); opened for initial project review and discussion.
- March 8, 2021: Planning Board Hearing; continued per applicant request.
- March 22, 2021: Upcoming Planning Board Hearing (#4).

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For clarity of the Administrative Record, the Town's comments are provided in *italics* below, followed by a response from the Applicant and/or B+T in **bold** detailing how the comment has been addressed.

General:

1. The Application requests certain waivers to the requirements of Site Plan Review; Section 1532, 1532.1 and Section 591.6 for large ground mounted solar projects. The latter reference is in error and should be Section 594.1(6).

**Response: No response required. The Applicant respectfully withdraws the associated waiver requests, though expects further discussion with the Board related to fencing as noted in Response #2 below.**

2. The Planning Board cannot grant waivers to Article 15, Site Plan Review requirements or the requirements of Section 590, Solar Energy Generation Facilities of the Zoning By-Law. However, relief can be sought through the Board of Appeals by requesting a variance from the Zoning By-Law Requirements.

**Response: After the February 22, 2021 meeting discussion and follow up March 2, 2021 memorandum provided by Town Planner Ken Buckland, it is unclear to the Applicant if a security fence is required in these circumstances. As such, we have included a perimeter fence in the revised plans and look forward to discussing options with the Planning Board at the next hearing for the necessity, extent and specific size and type of fence materials.**

3. Specifically, the waiver request is for the project not to have fencing around the facility. As stated in the By-Law the fencing is for security purposes. In addition, there are requirements for the type of fencing when it serves a dual purpose of providing visual relief.

**Response: Please refer to Response #2 above.**

4. Section 594.1(6) requires facilities to be fenced for security and with fencing that blends into the landscape.

**Response: Please refer to Response #2 above.**

5. Section 594.3(1) requires structures to be screened from view from outside the project site, from the public right of way and from residential districts. In this instance it would apply to all of the battery storage areas that are part of the project.

**Response: The Project generally abuts lands in similar nature including cultivated cranberry bogs to the south and west. The Project abuts North Carver Road to the west and is naturally screened along this side as discussed at the Planning Board hearing on February 22, 2021. Refer to the enclosed photographs taken while driving along Route 58 depicting the existing vegetation. The Applicant has been in contact with the direct residential abutter and has provided a letter of support herein.**

Plans:

1. The first several sheets (TP1-9) are supplemental only and do not provide information that is not shown on Sheets C-1.1 through C-5.3.

**Response: No response required.**

Sheet C-3.1

1. This sheet shows the overall plan of the site for both Carver and Wareham. All of the rows are running north/south. It appears that the panels themselves will be facing east. Most projects have panels facing southeast to southwest to take advantage of the prevailing direction of sunlight. Please explain.

**Response: As discussed at the hearing on February 22, 2021, the Project is designed with rows oriented north-south because it will utilize a horizontal single-axis tracker racking system. The tracker system is equipped with a small motor that slowly rotates the panels from east facing to west facing allowing the project to follow the movement of the sun. In the morning the panels will begin facing east and then slowly rotate to the west by the afternoon. This system design allows the Project to capture more sunlight than a fixed tilt system, which has modules oriented southeast or southwest as indicated. Detail *Typical Rack Section & Rear Elevation* on Sheet C5.2 illustrates the single-axis tracker proposed for the Project. In addition, the following link contains a YouTube video showing an Array Technologies single-axis tracker system: <https://youtu.be/nhDWaT5MjVA>**

Sheet C-4.3

1. The plan shows a new access road to be cut through an existing wooded area and over the highest elevations. The grade approaching the cranberry bog on the southeast end of the road is 13%. This is extremely steep for an unpaved road. It is recommended that either the existing access road shown on the plan be utilized or the proposed road be relocated more southerly to take advantage of lower ground and much flatter grades. The proposed access is less than the customary 20 feet in width.

**Response: As requested, B+T has revised the grading of the proposed access road as depicted on the enclosed revised Site Plans.**

2. The plan shows a new cut for an electric line connection to the utility pole together with several new poles for a distance of 200 feet or more. The cut is shown 30 feet in width. It is recommended that an alternative location be used for the connection to the poles on North Carver Road to avoid opening up a clear path and view of the facility from the public way.

**Response: As requested, B+T has revised the location for the point of interconnection to utilize the proposed access road, as described at the February 22, 2021 hearing and depicted on the enclosed revised Site Plans.**

Sheet C-4.5

1. This sheet shows the southwesterly portion of the project and the proximity to North Carver Road. It is noted that the entrance gate and sign for Rocky Maple Bogs is directly opposite an existing utility pole on the opposite side of the road. It is a short distance to the proposed underground lines that would run east/west and north/south. From the standpoint of minimizing visibility of the project, this location is superior to the proposed one for the utility connection.

**Response: The Project has been designed to avoid impacts to and along North Carver Road and disturbance to the surrounding community. The proposed point of interconnection has been revised as noted above and depicted on the enclosed revised Site Plans.**



2. There is a long and well-maintained stand of Norway spruce that is along the easterly sideline of North Carver Road. It would effectively provide a good screen for the project from the public way. Most of the screen is dense with tree branches with only minor evidence of branches dying back close to the ground. This screen should be maintained and in those few places where the screen is light additional screening should be planted. Reference is made to Section 494.3.(1) of the Zoning By-Law.

**Response: The Applicant proposes to maintain the existing screening along North Carver Road. The Applicant has been in contact with the direct residential abutter and has provided a letter of support herein.**

3. The energy storage system in the southerly end of the project is in the riverfront area which is a protected area under the Massachusetts Wetlands Regulations and the Wareham Wetlands By-Law. It is recommended that the storage system be moved out of this area however, application is required to the Wareham Conservation Commission for these issues. Site Plan Review approval should reflect concurrence with the Conservation Commission's decision on these facilities.

**Response: The project, including the proposed equipment pads has been designed to avoid and minimize work in jurisdictional resource areas and buffer zones to the extent practical. The equipment pads have been raised to minimize the impervious footprint within Bordering Land Subject to Flooding (BLSF) and the 200-foot Riverfront Area. The Applicant anticipates filing a Notice of Intent (NOI) with the Wareham Conservation Commission for a detailed review of the project in relation to the resource areas onsite.**

4. The Loring W. Sellon property is an abutter to the project and is shown in part of this sheet and on Sheet C-4.3 of the plans. Screening of the project from this property should comply with Section 594.3(1) of the Zoning By-Law.

**Response: The Applicant has been in contact with the direct residential abutter and has provided a letter of support herein.**

Sheets C-5.1 to C-5.4

1. The details for mounting the solar panels appear to be inconsistent. Three different types of mounting panels are shown; screw anchors, 15" diameter timber piles and steel piles. Are all three styles to be utilized and if so where? How will such piles be set in place? Details indicate that some will be set as much as 8 feet below grade. What kind of equipment will be necessary?

**Response: As discussed at the February 22, 2021 hearing, geotechnical borings (and push/pull tests) will be conducted to determine the depth and condition of peat deposits within the wetland cranberry bogs. The racking systems will be dependent on the outcome of the geotechnical investigations and therefore, the Applicant has provided information on the possible types of racking systems that may be utilized. Additionally, depending on the variability of the peat and determination of the investigations, more than one kind of racking system may be required to actualize the design.**

#### Stormwater Calculations

1. The peak rates of runoff and runoff volumes appear to be nearly identical for both pre- and post- construction conditions. This is not unusual since the project area is located over cranberry bogs where the grading is being maintained and direct runoff is not affected.

**Response: No response required.**

2. Cut/Fill storage calculations have been included as part of the report. Please explain the flood storage analysis and what contributes to the significant change in volume. How is this related to the project? Most activity involving cut and fill lies within the Town of Carver at the northerly end of the site.

**Response: The Flood Storage Analysis was included to determine the existing and proposed flood storage volume within the area of the proposed work in the 100 Year Flood Zone AE. The analysis compares the proposed incremental flood storage volumes to the existing volumes. The conclusions from the Flood Storage Analysis was that adequate compensatory flood storage exists on a cumulative and an incremental basis at the elevations of proposed work within the floodplain.**

#### Decommissioning Plan

1. The decommissioning plan is broken out into various components and is found in the Application booklet. Two particular items stand out as concerns.
  - a. Length of steel support piles that are described in the plan are not consistent with the length of piles noted on Detail Sheets C-5.1 through C-5.3 and the narrative provided. There is no indication as to how the piles would be extracted without damage to the bogs. The cost may be much more than what is estimated.

**Response: The piles will be extracted using the same equipment that was used to install them.**

- b. The cost of restoration of 28 acres of cranberry bog land appears to be very small. Equipment crossing the bogs will do significant damage to vines unless there is a means to protect them during removal of piles, wiring, panels and other materials.

**Response: The report was prepared by the same engineering firm using the same methodology as the decommissioning reports accepted by the Town of Carver for two similar dual-use projects. The equipment will be driven on mats while crossing the bogs to protect the vines from damage.**

2. The concern over land restoration in this case would rest more with the landowner and would not have a significant impact on erosion in the same way as upland solar projects might have. But the damage to the cranberry bogs during the removal process could be significant. It should be made clear that the approval of such a project as this by the Wareham Planning Board does not imply liability for bog damage that might occur.

**Response: To restore areas of damage due to repairs or construction on the bogs, typically, growers simply add sand from onsite resources or stockpiles and either plant small plugs or distribute cuttings from nearby vines over disturbed or bare areas, similarly to the photographs below.**



**Photograph 1: Bog planting using sand and individual cranberry vine “plug” methodology. The plugs are planted directly into the substrate by hand or tractor pulled planting mechanism in large areas.**



**Photograph 2: Bog planting using sand and distributed vine cuttings from nearby established bogs. The cuttings are typically spread by hand on the bog surface.**





**Photograph 3: Irrigation encourages growth of vine cuttings.**



**Photograph 4: Bog renovation area becoming established as vines take root and spread.**

George Barrett, Chair  
Town of Wareham Planning Board  
March 11, 2021  
Page 11

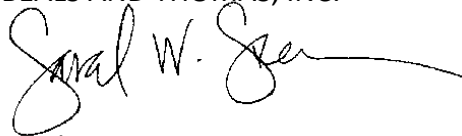
3. The Conservation Commission may wish to consider how the decommissioning process will proceed and how water resources downstream from the facility can be protected or would be impacted by the disturbance of soil, vines and ditches during the removal of piles and hardware. Cranberry bog ditches, outlet flumes and streams are connected ultimately to the Weweantic River.

**Response: The Applicant anticipates filing an NOI with the Wareham Conservation Commission to discuss these questions as related to the Wetlands Protection Act and Wareham Wetland Bylaw.**

Should you have any questions regarding this matter or require additional information, please contact me at [sstearns@bealsandthomas.com](mailto:sstearns@bealsandthomas.com). We thank you for your continued consideration of this application and look forward to discussing this further with the Board at the next public hearing scheduled for March 22, 2021.

Very truly yours,

BEALS AND THOMAS, INC.



Sarah W. Stearns, PWS  
Associate

Enclosures: Site Vegetation Photographs dated January 23, 2021  
Revised Site Plans, dated March 11, 2021  
Revised Stormwater Management Report, dated March 11, 2021  
Sellon Letter to the Wareham Planning Board, dated March 1, 2021

cc: Adam Schumaker, BE RE, LLC (via Email)  
Iain Ward, NE Consulting (via Email)  
Brett Meredith, Rocky Maple Bogs (via Email)

CEB/nbb/sws/aak/20300LT002



January 23, 2021: Traveling northbound on Route 58







































March 1<sup>st</sup>, 2021

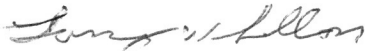
Wareham Planning Board  
54 Marion Road  
Wareham, MA 02571  
Attn: Kenneth Buckland, Wareham Town Planner

**Re: BE RE, LLC Solar Project at 20 N. Carver Road, Wareham/Carver**

Dear Members of the Planning Board:

We own the property at 15 N. Carver Road and 18 N. Carver Road and currently reside at 15 N. Carver Road in West Wareham. We are writing to express support for the dual-use, large-scale, ground-mounted solar photovoltaic installation that BE RE, LLC proposed to construct at 20 N. Carver Road in Wareham/Carver. We have reviewed the plans for the site with the developer and worked with them over the past several months to address our concerns. All of our concerns have been addressed to our satisfaction. We should do everything we can to make Wareham a Green Community, including supporting clean energy projects such as this one.

Sincerely,



Loring W. Sellon

Address: 15 N. Carver Road  
West Wareham, MA 02576



Deborah G. Sellon

Address: 15 N. Carver Road  
West Wareham, MA 02576