

October 23, 2023

Michael King, Chair
Town of Wareham
Planning Board
54 Marion Road
Wareham, MA 02571

Re: Second Peer Review
Large Scale Ground Mounted Photovoltaic
Solar Array
Site Plan Review Application
PB Case 11-23
0 Route 25
Wareham, MA

Dear Chair King and Members of the Planning Board:

In accordance with our contract to conduct a peer review of the Large Scale Ground Mounted Photovoltaic Solar Array Site Plan Review application associated with the Proposed Ground Mounted Photovoltaic Solar Array at 0 Route 25 in Wareham, Massachusetts, Allen & Major Associates, Inc. (A&M) is pleased to provide the following comments. The comments presented below are based on the review of the design documents provided to A&M by Wareham Planning and Community Development. A&M did not conduct a field assessment of the project but can do so if the Planning Board requires.

It is A&M's understanding that the applicant had previously applied for a Site Plan Review from the Wareham Planning Board for a similar project and that project was withdrawn without prejudice by request of the applicant on June 21, 2023. The primary issue of the prior application was the storage of batteries and handling during emergency conditions. The current application removes the storage element. The withdrawal letter states that they make seek future considerations of the Planning Board to allow for battery storage.

In conducting the peer review, A&M reviewed the following documents:

- Site Plans for the Proposed Large-Scale Ground-Mounted Solar Photovoltaic Installation 0 Route 25 Wareham, Massachusetts prepared for Wareham PV I, LLC prepared by VHB dated June 26, 2023 revised September 22, 2023;
- Stormwater Report Proposed Large-Scale Ground-Mounted Solar Photovoltaic Installation 0 Route 25 Wareham, Massachusetts prepared for Wareham PV I, LLC prepared by VHB dated June 2023 revised September 2023;
- Cover Letter, Site Plan Review Application, Project Narrative, certified abutters list, and checklist prepared by VHB dated June 26, 2023;
- E-mail from the Wareham Fire Department dated August 9, 2023;
- E-mail from the Wareham Fire Department dated September 14, 2023;
- Letter to the Planning Board prepared by Klavens Law Group dated October 5, 2023 regarding the applicability of the 75-ft setback;
- Response to Peer Review Comments letter prepared by VHB dated October 5, 2023;
- VHB Memorandum dated October 6, 2023 regarding a Tree Survey;
- VHB Memorandum dated October 5, 2023 regarding compliance with 225 CMR 20.05(5)(e);
- VHB letter dated October 6, 2023 regarding compliance with section 593 of the bylaws;

- MS4 Stormwater Management Permit Application prepared by VHB dated October 6, 2023;
- Informational material provided by Nancy McHale as posted on the Planning Board documents page, "Growing Solar, Protecting Nature" as prepared by Harvard Forest and Mass Audubon study;
- Letter to the Planning Board prepared by Klavens Law Group dated October 6, 2023.

A&M reviewed the information/materials, listed above in conjunction with the applicable requirements of:

- Town of Wareham By-Laws revised October 25, 2021;
 - Division IV, Article III Earth Removal Regulations;
 - Division V, Article XI, Article I Stormwater Management & Article II Illicit Discharge;
 - Division VI, Article I Wareham Wetland Protective By-Law.
- Town of Wareham Zoning By-Laws Revised April 24, 2023;
 - Article 4: Overlay Districts
 - Article 5: Supplement Regulations;
 - Article 7: Design Standards and Guidelines;
 - Article 9: Parking;
 - Article 10: Landscaping;
 - Article 12: Performance Standards;
 - Article 15: Site Plan Review.
- Massachusetts Stormwater Handbook, Volumes 1 through 3, as applicable under the Massachusetts Wetlands Protection Act (310 CMR 10.00) with focus on the Stormwater Management Standards.
- National Fire Protection Association (NFPA 1) and the Massachusetts Amendments (527 CMR 18) as applicable to site development plans.

The following represents A&M's review comments. A&M may submit additional comments based on supplemental information provided after the initial peer review.

Wareham By-Laws and Zoning By-Laws

1. Issue resolved, no further comment.
2. Zoning By-Law Section 1031 requires "new projects or expansions exceeding 5,000 square feet of non-residential development or more than three multi-family dwelling units, the landscape plan shall be prepared by a registered landscape architect whose seal shall appear on the plan." Landscaping plans have been provided but have not been sealed by a landscape architect. Landscaping plans are relying on the use of the existing natural vegetation and limited new plantings are being proposed in select areas of the proposed project. Based on review of the plans the applicant is not providing a 50 foot vegetated landscaped buffer as outlined in Section 594.1 subsections 3 through 5. Partial landscaping is proposed on the southerly side of the access road (Sheet C2.02) to infill where no vegetation currently exists. On the northerly side of the same access road, no vegetative improvements are proposed where no vegetation exists. The landscaping for purposes of classification fall under the Industrial designation (594.1 (2) and incorporate the standards of Article 10 landscaping. The landscaping plan fails to provide any pertinent detail on the "location, general type, and quality of

existing vegetation, including trees" (1032.3). The Planning Board retains the opportunity to request additional plantings, or alternative measures, within the vegetative buffer to meet the performance standards of the By-laws. Without commentary to the existing vegetation, there is no ability for the Board to render an opinion on supplementing the current plantings. A&M recommends the applicant provide additional detailing on the existing state of vegetation that is intended to serve as buffer in the form of landscape narrative, pictures, qualitative measurements and other data to allow for further review. It is noted that the fencing for this project is "deer fencing" intended to delimit the project. The use as security fencing as outlined in 594.1 (6) should be clarified by the applicant. The fencing does not provide a visual barrier between adjacent uses and the Planning Board retains the opportunity to accept the fence as provided.

Updated Comment: The applicant has provided enhanced narrative on the intent of compliance with the landscape section of the bylaw as well as endorsement by a Registered Landscape Architect. The narrative includes an approach to identifying the quantity and type of tree species to be removed. A&M has no issue with the methodology as it seems reasonable to assess a large tract of land in a qualitative nature. The applicant's response to effectiveness of screening through placement relative to existing slopes and setbacks also appears reasonable. A&M defers the final acknowledgement of sufficiency to the Planning Board.

3. The proposed project is subject to Article 12: Performance Standards, subsection 1260 Analysis of Development Impact: Stormwater Runoff in Compliance with MS4. The project is subject to an MS4 Stormwater Management Permit (MS4 SMP) issued by the ZBA. The applicant should provide documentation on the status of the MS4 SMP for the record. The design engineer should provide additional narrative and calculations to show/demonstrate compliance with the removal of 90% Total Suspended Solids (TSS) and removal of 60% Total Phosphorus from the total post-construction impervious surfaces.

Updated Comment: The applicant has submitted the MS4 permit for review by the Board. A&M has no further comment. The application is supported by the stormwater calculations as provided. Issue resolved, no further comment.

4. Issue resolved, no further comment.
5. Issue resolved, no further comment.
6. Issue resolved, no further comment.
7. Issue resolved, no further comment.
8. Issue resolved, no further comment.
9. Issue resolved, no further comment.
10. Issue resolved, no further comment.
11. Issue resolved, no further comment.
12. The applicant provides two test pits located around infiltration basin 1 with no soil test pit provided in support of basin #2. In order to comply with the Massachusetts Stormwater Management Standards, one test pit per 5,000 square feet of management area is required. A test pit should be performed in support of basin 2. The soils in this area are generally consistent and should the Planning Board be amenable, a condition of permit can require the soils to be verified during construction.

Updated Comment: The applicant has acknowledged the requirement for confirmed soil testing in the locations proposed on the site plans for stormwater management. The Board may consider a condition of approval to allow for testing at the time of construction. The confirmatory testing should be witnessed to confirm that no changes to the design would be required. If soil conditions are determined different than anticipated, the applicant may need to submit revised documentation for the Planning Board's review and/or Planning Department administrative approval.

13. Issue resolved, no further comment.

14. Issue resolved, no further comment.

Statement on decommissioning estimate

The applicant has provided a decommissioning plan in accordance with Section 595 of the Zoning By-Laws. The plan of action includes a cost estimate that allocates approximately \$458,000.00 per Megawatt of decommissioning cost in concurrence with previous Planning Board recommendations with an additional 25% contingency and inflation value for a total surety estimate of \$2,003,750. This value aligns with the estimated costs of decommissioning as promulgated by the National Renewal Energy Laboratory which provides an estimated cost of \$300 - \$440 per kw (\$300,000 - \$440,000 per MW). The surety as provided is a reasonable estimate to the cost of decommissioning.

Updated Comment: The applicant has acknowledged the Planning Board's policy relative to establishing decommissioning values as suggested. A&M has no further comment and defers to the Planning Board.

Given the revisions submitted by the applicant, A&M has no further technical issues on the materials as submitted and defers to the Planning Board for further action. A&M does note the ongoing discussion regarding adherence to Zoning Section 595 Design Standards and the implementation of a 75' setback to residential properties. Depending on the outcome of this process, additional changes may be required to the application. A&M further notes that during the public discussion portion of the Planning Board meeting on October 16, 2023, it was noted by a member of the public that implementation of battery storage occurs on Page 37 of the initial project report – project schedule. The applicant has confirmed this is a typographical error and no battery storage is proposed as part of this project.

Very Truly Yours,

ALLEN & MAJOR ASSOCIATES, INC.

Philip Cordeiro, PE
Branch Manager