

C-5007-002
Revised February 20, 2019

Conway Planning Board
c/o Alexis Fedorjaczenko
32 Main Street
Conway, MA 01341
adminasst@townofconway.com

Re: **Conway Solar, LLC – Peer Review**
2394 Main Poland Road (Newman Property)

Members of the Planning Board:

Tighe & Bond was retained by the Town of Conway to provide Peer Review Services to the Planning Board in their review of the Site Plan Review Application for the construction of a ground-mounted solar project on an approximately 104-acre lot located at 2394 Main Poland Road in Conway, MA. The proposed development is referred to as “the Project” throughout this letter.

In December 2018, an application for Site Plan Review was submitted by Conway Solar LLC (the Applicant). Our peer review of the Project included the review of the Site Plan Review Application Package, including supporting drawings. A site visit was performed on February 6, 2019 and was attended by representatives from Tighe & Bond, the Conway Planning Board, the Applicant’s Engineer and the property owner.

The application and site plans were reviewed for compliance with Section 63 (Special Permit), Section 64 (Site Plan Review), and Section 91 (Large Scale Solar Facilities Bylaw) of the Conway Zoning Bylaw. The Stormwater Management System was reviewed for technical accuracy and compliance, as regulated under the Massachusetts Wetlands Protection Act (MAWPA) (M.G.L. c. 131 § 40) and its implementing regulations (310 CMR 10.00), including the Massachusetts Stormwater Management Standards and Section 32.3 (Water Discharge) of the Conway Zoning Bylaws.

We offer the following comments for the Board’s consideration:

1. *Revised:* The project site is located within the Residential and Rural Residential & Agricultural Zoning District. Pursuant to Section 64(c) (Site Plan Review; Applicability), Site Plan Review is required for all Large-scale Ground-Mounted Solar Facilities.

In general, the application addresses most of the Town’s general Site Plan Review criteria and the criteria for a ground-mounted solar PV project at Section 91 of the Bylaw, with some exceptions noted below.

2. *Revised:* We note that our agreement with the Town of Conway Planning Board requires us to review the application for consistency with the Special Permit criteria. However, after discussion with a Planning Board representative, it is our understanding that a Special Permit is not required for this project. As such, we find that the application does not address the Special Permit criteria found in Section 63(b): Traffic Flow and Safety, Adequacy of Utilities, Qualities of the Natural Environment, Impact on Other Properties, or Community Health. The Planning Board should determine if any additional information is required by the Applicant.



3. The project parcel is owned by Robert and Sarah Newman based on information provided in the application materials. Based on our review, the property owner did not sign the Site Plan Review Application form, and no documentation of site control has been provided as required by Section 91(e) of the Conway Zoning Bylaw. The Applicant should provide an application form signed by the property owner and should specify what their agreement with the landowner is.
4. Tighe & Bond did not receive or review proof of liability insurance as required by Section 91(d)2.(e) of the Conway Zoning Bylaw.
5. As noted in the Town of Conway Protective Zoning Bylaws Section 64 Required Contents of a Site Plan, the Applicant should address the following:
 - a. Estimated average daily and peak-hour vehicle trips to be generated by the site
 - b. Size and location of existing and proposed sign(s)
 - c. Location of existing farmland and agricultural soils classified as prime farmland or soils of state and local importance
 - d. Size in acres of each of wetland
 - e. Location and use of buildings and structures within 300' of the site
 - f. Location and use of existing and proposed buildings and structures including approximate height and floor area
 - g. Location and date of all registered "perc" tests on the site
6. The Applicant should confirm whether the remaining vegetation to the west of the array will provide sufficient screening to properties located in the Town of Ashfield. The Board may wish to consider requesting additional screening measures if visual impacts are a concern.
7. The Applicant's Surety Proposal of \$76,000 to remove a 6 MWDC system appears insufficient based on comparison to similar projects and Tighe & Bond's experience with disposal and removal costs. Further, we note that Section 91(j)6.ii of the Conway Zoning Bylaw requires submittal of a financial surety that takes inflation into account. The Applicant's estimate does not include an escalator. We note that the estimate provided was not project-specific but rather based off a similarly sized project. The estimate assumes that disposal costs will not be incurred for any system components and assumes that there is salvage value to the material. The information provided states that the salvage value rates are based on 2018 values and not values from 2038 (assumed 20 year life).

We also note that the decommissioning of the energy storage unit was not included in the estimate.

8. Since the project requires an Order of Conditions from the Conway Conservation Commission, the Massachusetts Department of Environmental Protection (MassDEP) Wetlands Program Policy 17-1: Photovoltaic System Solar Array Review document applies. This document indicates that solar panels are not considered impervious surfaces due to the availability of vegetative ground cover beneath them. The project proposed to furnish



a grassy, meadow vegetation between and beneath the solar panels; therefore, we recommend the project consider LID Credits as a means to demonstrate that the project will provide groundwater recharge and TSS removal without substantial structural stormwater management features.

9. The following aspects of the MassDEP guidance document that would impact the solar facility layout and stormwater management approach are summarized below:
 - a. The Applicant proposes 2" of clearance beneath the chain link security fence and chain link personal gate. It is recommended that the fence be at least 6 inches off the ground to provide for wildlife passage for the length of the fence.
 - b. The Applicant should confirm that shading impacts were considered during the design of the array layout. The Applicant should identify any shading setbacks that were used.

10. In general, the project has been designed to meet the intent of the Massachusetts Stormwater Standards. The following comments request additional information to fully satisfy select Standards.

- a. Standard 2: The following comments pertain to peak rate attenuation.
 - ii. The NOAA Atlas 14 provides a more current database for the determination of estimated rainfall depths and distributions for the New England region as Technical Paper (TP) 40 was issued in 1961 and is outdated. The rainfall data used in the provided hydrologic analysis does not match the values provided in Atlas 14. While the rainfall depths during more frequent storm events may be negligible to the design, the 100-year storm event may require modifications to the design. The Board may wish to require the Applicant to evaluate the proposed stormwater management design with the following rainfall depths per Atlas 14 for the 100-year storm event:

Rainfall Depths (inches)	2-Year Storm	10-Year Storm	100-Year Storm
As Proposed	3.20	4.80	7.00
Atlas 14	3.17	4.89	7.62

- iii. The Applicant maintained existing times of concentration under proposed conditions, which does not account for the change in ground cover from woods to meadow. The Applicant should revise the times of concentration to reflect this change in ground cover.
- b. Standard 3: We note that no site-specific soil evaluation was performed. The detention basin appears to require 2-3 feet of cut. We note that the detention basin is not intended to infiltrate; however, the groundwater elevation within the limits of the basin should be determined so the water table is not intercepted by the stormwater basin.
- c. Standard 8: A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must be submitted as part of the Stormwater Report. While we understand that a Stormwater Pollution Prevention Plan will be developed prior to construction, we have found that construction-period stormwater management is frequently not taken into account during permit-level design. Once the project advances to a construction level, lease



boundaries are often already established, leaving little room for construction-period stormwater management features to be constructed within the lease area. It should be noted that perimeter erosion controls alone are generally insufficient for the management of construction-period runoff. We recommend the Board request additional construction-period stormwater management control design be considered during the permit-level phase.

11. Sheet C2.02 references a construction entrance detail. This detail is not included in the drawing set. The Applicant should provide this detail.

12. The Applicant should provide a limit of work on the drawings.

We trust this information will be satisfactory for the Board in your review of the Project Site Plan Review Application. Please do not hesitate to contact me should you have any questions or need additional information at 413.572.3238 or jechristy@tighebond.com.

Very truly yours,
TIGHE & BOND, INC.


Jean E. Christy, PE
Senior Engineer

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