

## **EXHIBIT C**

## Memorandum

To: Nabil Ghanem, PE  
From: Daniel Farnan, PE, CPESC, CPSWQ  
Date: March 7, 2023  
Subject: YSG Solar - Bridge Permitting Analysis  
Project No.: 23004045A

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### Replacement vs. Rehab

Rehabilitating the existing bridge superstructure will require less permitting and approvals than a full replacement (which includes the replacement of the bridge substructures). For a Bridge Rehabilitation option, the contractor will be required to avoid wetland and stream disturbances and avoid tree cutting if vegetation adjacent to the bridge approach needs clearing for cranes or other construction equipment. The contractor will need to install nets and stream protections to avoid pieces of the superstructure replacement from falling into the stream.

In an ideal bridge rehabilitation operation, only the SEQRA EAF and project SWPPP (to include project area of the bridge and staging site) would be required. All other permit requirements may be avoided with proper care and planning.

Although the bridge replacement permitting scope is more involved, we believe that the permitting requirements for the bridge replacement scope of work can be accomplished just as efficiently and in a timely matter.

However, if the existing bridge substructure requires rehabilitation or replacement, all of the following permitting procedures will be required.

### Permits and Approvals for Full Bridge Replacement

It is anticipated that the project would require the project to obtain all applicable permit(s) and certifications, including but not necessarily limited to:

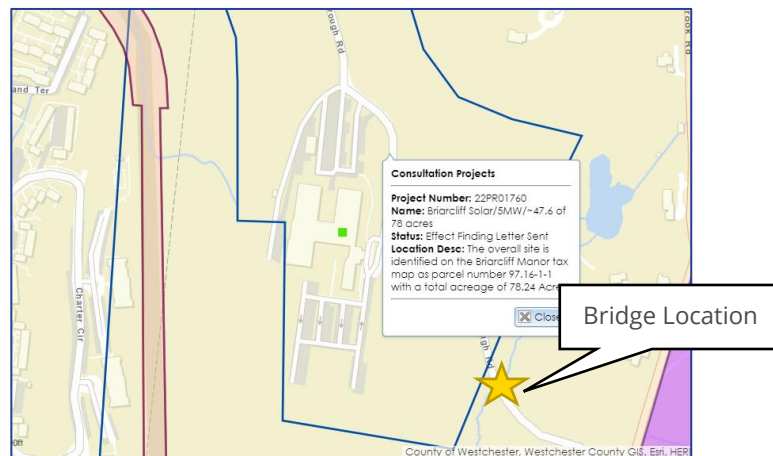
- U.S. Army Corps of Engineers Section 404 Permit (Nationwide)
- NYSDEC Section 401 Water Quality Certification
- SEQRA
- NYSDEC State Pollution Discharge Elimination System (SPDES) Permit (overall site)

The NYSDEC Environmental Resource Mapper depicts No State Regulated Freshwater Wetlands immediately upstream and downstream from the bridge within the anticipated project limits. Federal Jurisdictional Wetlands may be present within the project limits and will need to be investigated. If wetlands exist, they will need to be delineated by wetland scientist and located by a land surveyor.

The NYSDEC EAF Mapper Summary Report has identified several potential environmental impacts that will require some investigation including Surface Waters and Floodplains. **However, since the site has gone through many of these screenings, the intent would be to include the bridge replacement project as part of the project disturbance.** To obtain the NYSDEC Section 401 and assumed Nationwide Section 404 Permit, a Joint Application will be made to both agencies with all data required for submittal. At minimum, the following work will be required, which may be provided by Colliers or others:

- Wetland Delineation and Report
- Field determination of Ordinary High-Water (OHW) location (not the existing edge of water)
- Land Survey of the bridge, wetlands delineation and OHW
- Screening of Threatened and Endanger species through US Fish & Wildlife, and NYSDEC Heritage program.

In order to obtain permits, a screening through the State Historic Preservation Office is required. **A review of SHPO's CRIS website (below) shows the site was already analyzed. However, the area of the bridge was not included.** Any existing effect finding letter will need to be revised by SHPO for this permitting process. It will be more efficient and economical for the client to approach SHPO for an amendment with the consultant who submitted the consultation project shown in the figure below.



*Figure 1 – SHPO's CRIS Output with existing consultation project shown*

## Stream Hydrology and Hydraulics for Full Bridge Replacement

Based on a preliminary hydrologic/hydraulics investigation for the Sparta Brook at the crossing of Scarborough Road/Shadow Brook Lane, the drainage area for the hydrology analysis is 0.41 square miles. It is anticipated that the bridge is hydraulically capable of passing the 100-year design storms due to storage upstream of the bridge and is not mapped by FEMA. However, it's likely not compliant with the 2-foot freeboard (50-year storm) and passing the 100-year (below low chord). A hydrology and hydraulics study should be performed when the alternative structure types are determined, as a basis of comparing existing and proposed crossings.

The project will be subject to no raising of the 100-year storm event due to the bridge replacement. At a minimum NYSDEC may require the bridge increase span x1.25 bank to bank length (natural stream sizing).

### **SEQRA – Rehab or for Full Bridge Replacement**

Work to the bridge (and required permits if needed) will need to be considered in the overall State Environmental Quality Review Act (SEQRA) Environmental Assessment Form EAF. It is assumed the client will have already conducted a review of SEQRA and completed a draft EAF for their application to the Town. That form will need to be edited to include the area of proposed bridge work. The form will also be needed in submittal packages to various permitting agencies, as needed.

### **SWPPP– Rehab or for Full Bridge Replacement**

It is assumed the client will have a SWPPP created for the overall project. Proposed bridge work and land disturbances will need to be included in the SWPPP.