

July 29, 2024

Eric Graettinger, PE, LEED AP BD+C, IES  
Peter Basso Associates, Inc.  
5145 Livernois, Ste 100  
Troy, MI 48098

RE: Review Roof for Solar PV Loading – Port Authority – Detroit, Michigan  
Ruby 24-026-06 (24-026-06 Letter)

Dear Mr. Graettinger,  
Ruby has completed a structural engineering review to determine the feasibility of installing ballasted PV racking systems and panels on the existing roof at the Port Authority building in Detroit, Michigan.

Ruby's review included the following reference information and drawings:

- Port Authority as-built drawings (dated 08/21/2009 - 49 pages, 3 structural drawings)
- Photos of additional Port Authority as-built drawings (3 structural drawings)
- Peter Basso drawing E3.03 "Roof Power Plan"
- Jinko JKM460-480N-60HL4 basis of design literature (2 pages)
- RM10 Installation Guide (16 pages)

Ruby's review did not include a review of the design of the actual ballasted PV racking system, panels, or any review of the appropriate wind loading on the system to determine quantity of ballast blocks for the PV racking system.

Based on the information provided by Peter Basso, the additional total weight for the ballasted PV racking system and panels is estimated at an equivalent loading of 8 to 10 pounds per square foot over the applicable roof surface area.

Based on Ruby's review of the as-built drawing and our engineering calculations, Ruby's professional opinion is that the ballasted PV racking systems and panels may be installed on the existing roof structure without any structural reinforcement.

If you have any questions, please feel free to contact our office. Ruby+Associates, Inc. appreciates the opportunity to serve your organization and looks forward to a continuing relationship.

Sincerely,  
Ruby+Associates, Inc.

Thad Greiner, PE, SE  
Principal

