

**MATRIX DEVELOPMENT, LLC**

153 Mercer Street, #4  
New York, New York 10012



January 3<sup>th</sup>, 2022

Attn: Mayor Pugh, Village Manager Healy and Trustees  
Croton-On-Hudson Planning Board  
1 Van Wyck Street  
Croton-on-Hudson, NY 10520

RE: Chazen 12-17-2021 HNGC/Matrix Development – Solar Project - Engineering Review

Dear Mayor Pugh,

In response to Chazen Companies recent engineering review dated 12-17-2021 the following responses have been prepared for consideration.

COMMENTS ON Response to MCCULLOUGH, GOLDBERGER & STAUDT

1. The applicant proposes to plant 10 conifers six to eight feet tall at the discretion of the Village Engineer prior to issuance of the construction permit. It would be more appropriate to discuss the location of the trees prior to issuance of a completed works certifications (certificate of occupancy or similar instrument). That way, the trees can be planted where they will have the most impact on mitigation of array visibility.

**Matrix: We have no objection to this request.**

2. The count of “poor” trees should be included in the live count as these are regulated as part of the Village ordinance.

**Matrix: Updated Site Plan to on or before 01/03/2022 is updated as requested.**

3. The use of Fend Off Deer and Rabbit Repellent Clips appears to be appropriate on this site.

**Matrix: No response required.**

4. The applicant provided a detailed explanation of the reason for the location of the array, but can Matrix please identify if there are other potential points of interconnection (POI) around the HNGC property? And is it the role of the developer to dictate the POI location, or is that at the sole discretion of the utility company?

**Matrix: No alternative electrical interconnection locations supplied by Con Edison exist on or near the golf course other than Prickly Pear Hill Rd service located at approximately 16 Prickly Pear Hill Rd. Figures 1, 2, and 3, below come directly from the Con Edison Hosting Capacity Map which identify approximate location of available utility circuits and the respective electrical capacity of each line. Neither Arrowcrest Drive, nor Finney Farm Rd circuits have available hosting capacity for a solar system of any size as shown in the attached maps. Arrowcrest and Finney maps specifically indicate “No Hosting Capacity”. It’s the role of the developer to propose the interconnection point based on available hosting capacity information. See also, for additional information, Matrix response letter submitted on December 23, 2021, Alternative Solar Site Evaluation – Old Driving Range.**

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Figure (1) – Prickly Pear Hill Rd

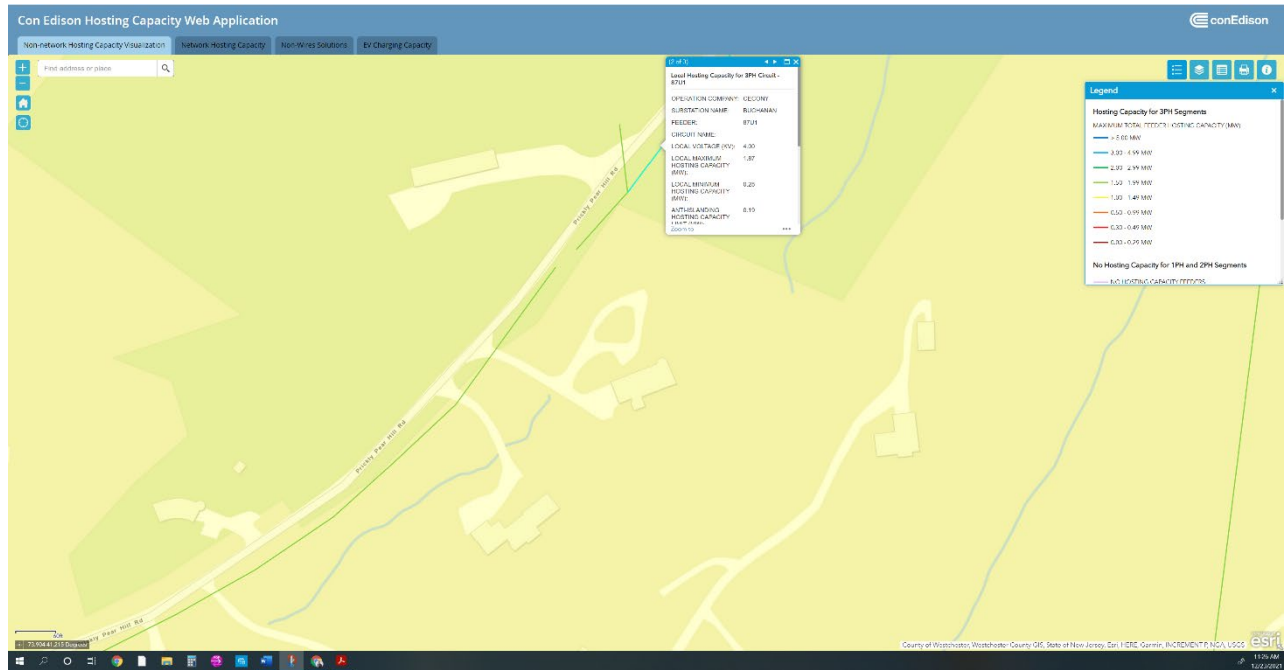


Figure (2) – Finney Farm Rd.

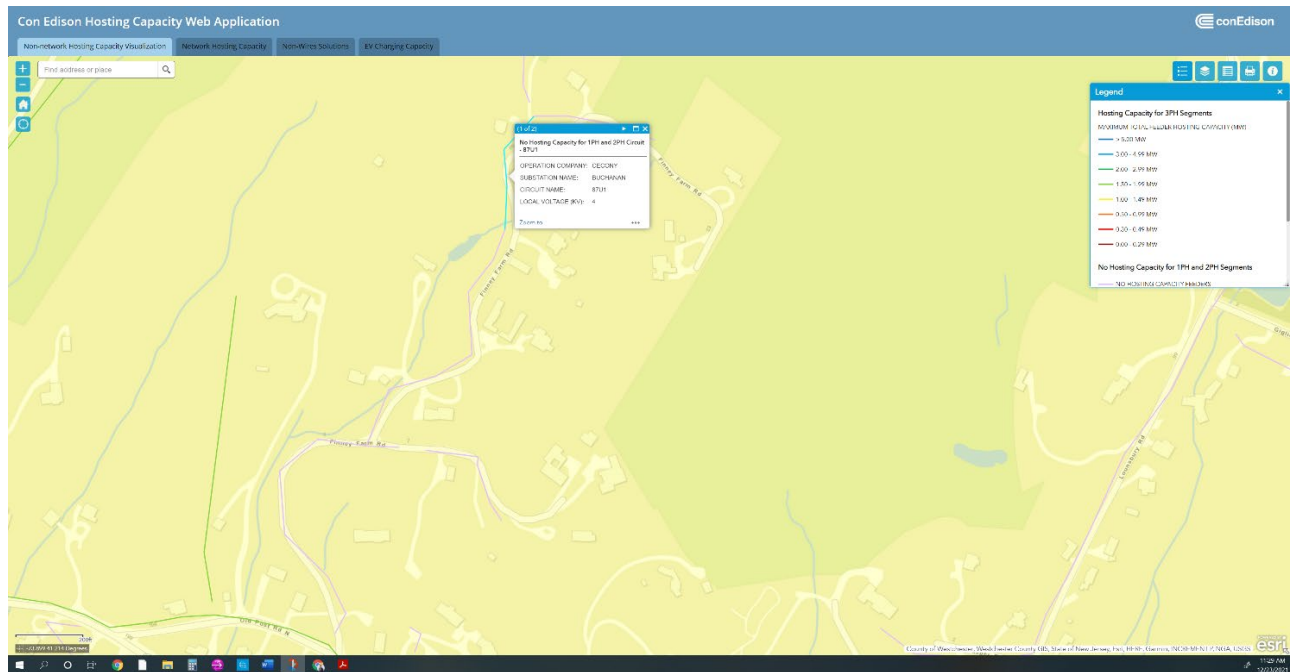
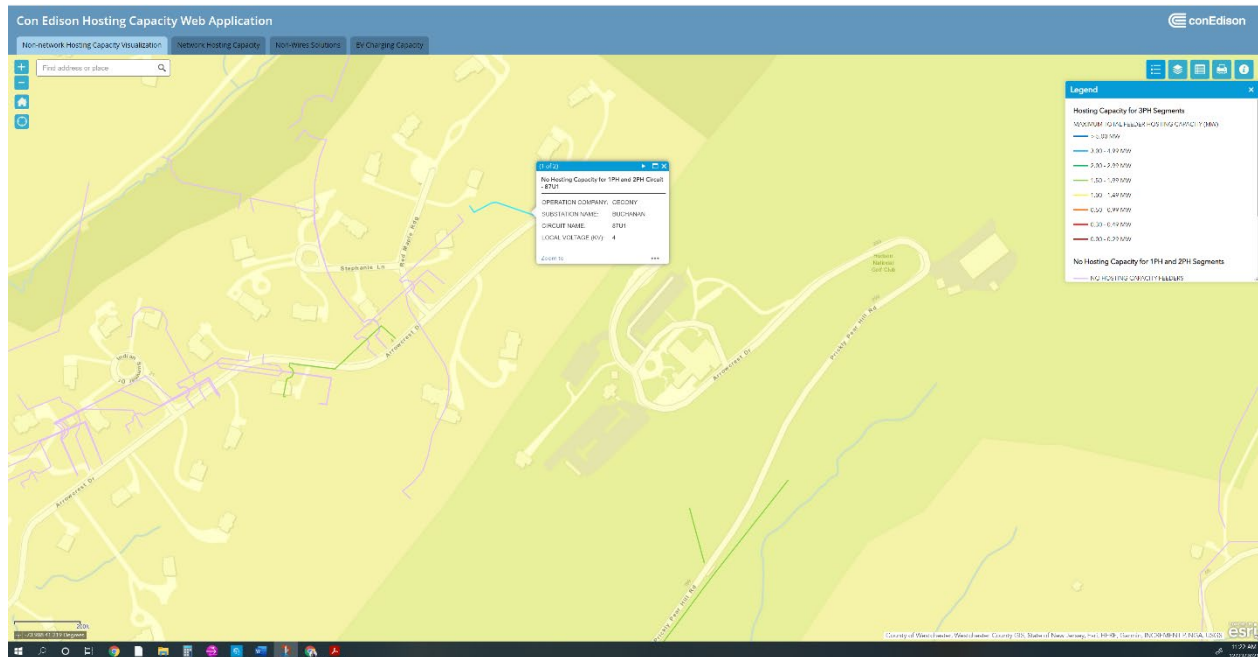


Figure (3) – Arrowcrest Drive



5. The explanation for siting the electrical equipment on the south side of Prickly Pear Hill Road seems reasonable, but this presents the issue of Tier 3 solar facilities being allowed only as the principle use on a parcel. Wouldn't the electrical equipment therefore have to be on a parcel separate from the primary HNGC parcel?

**Matrix:** The proposed subdivision will be updated to incorporate the ancillary electrical equipment located on the southeast side of Prickly Pear Hill Rd. The updated subdivision plan submitted on January 3<sup>rd</sup>, 2022, will include the solar panel arrays and electrical equipment.

6. We acknowledge that the inclusion of energy storage will be a benefit to the local electrical grid, but the Special Use Permit application, Site Plan application, and Environmental Assessment Form must be updated accordingly. It appears that applicant has already considered the visual affect of the Megapack and has proposed screening. The applicant should address the potential for impacts on ambient noise levels associated with the operation of the Megapack.

**Matrix:** The Tesla Megapack utilizes a liquid air-cooled heat rejection system, similar to a residential air conditioner. Based on local weather conditions and planned duty cycles, noise levels will not exceed 60 to 65 db at 32 feet. The nearest residence is over 320 feet from the proposed energy storage system which is shielded by wooded forest and newly planted trees. Any contributory ambient noise from the energy storage system will naturally dissipate below the decibels of a normal conversation (60 db) before reaching adjacent property boundaries.

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7. The applicant is requested to address the comments provided by Chief Karpoff. The final plan should be updated accordingly. As none of the requested changes will affect environmental review, we anticipate these items will be addressed during Site Plan review.

Matrix: The following actions will be taken.

- a) A note will be placed on plans to maintain at least 6ft radius of horizontal clearance around the hydrant that is close to the array.
- b) A note will be placed on plans to maintain at least 14ft 6in vertical clearance between the roadway and the overhead electrical service between the array and the main grid connection.
- c) Product data sheets have been provided for solar panels, inverters and energy storage equipment. External fire suppression system for the energy storage system will be provided for the site plan review.
- d) A note will be placed on site plans to provide a Knox Box keyholder on fence of electrical equipment area.
- e) A note will be placed on site plans to install signage on the fenced enclosure with emergency contact information for Prickly Pear Solar LLC or contracted vendor.
- f) Matrix will provide the CFD a site safety walkthrough and training on handling an emergency.

COMMENTS ON MATRIX RESPONSE TO CHAZEN

1. We acknowledge that the inclusion of energy storage will be a benefit to the local electrical grid, but the Special Use Permit application, Site Plan application, and Environmental Assessment Form must be updated accordingly. It appears that applicant has already considered the visual affect of the Megapack and has proposed screening. The applicant should address the potential for impacts on ambient noise levels associated with the operation of the Megapack.

Matrix: This is a duplicate question. See COMMENTS ON Response to Mccullough, Goldberger & Staudt, response to question #6

2. No further comments on the decommissioning plan.

Matrix: No response required.

3. The applicant is requested to address the comments provided by Chief Karpoff. The final plan should be updated accordingly. As none of the requested changes will affect environmental review, we anticipate these items will be addressed during Site Plan review.

Matrix: This is a duplicate question. See COMMENTS ON Response to Mccullough, Goldberger & Staudt, response to question #7

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4. The applicant provided a detailed explanation of the reason for the location of the array, but can Matrix please identify if there are other potential points of interconnection (POI) around the HNGC property? And is it the role of the developer to dictate the POI location, or is that at the sole discretion of the utility company?

Matrix: This is a duplicate question. See COMMENTS ON Response to McCullough, Goldberger & Staudt, response to question #4.

5. We are comfortable pushing additional review of the drainage calculations to the Site Plan approval process, but we defer to the Village Board to make this determination.

Matrix: This level of detail would be more appropriately handled by the Planning Board during a Site Plan review.

COMMENTS ON RALPH MASTROMONACO RESPONSE TO CHAZEN

The count of “poor” trees should be included in the live count as these are regulated as part of the Village ordinance.

Matrix: This is a duplicate question. See COMMENTS ON Response to McCullough, Goldberger & Staudt, response to question #2.

2. If the jute mats are only included as a means to help establish vegetation, what other measures are proposed to address the potential for channelization and erosion on the steep slopes in the array? It may be appropriate to add check dams or similar devices in the existing flow channels, particularly while vegetation is established on site. We view this as a technical issue that can be discussed during the Site Plan approval process.

Matrix: We added a detail and locations of check dams to the Site Plans.

3. A detail for a temporary swale has been added. We have no further comments on this matter.

Matrix: No response required.

4. The applicant intends to integrate the existing drainage structures on the driveway to Lands N/F of Reilly with the newly proposed drainage. We have no further comment on this matter.

Matrix: Hudson National Golf Course staff has nearly completed construction on the approved Storage Facility drainage measures.

5. The callout for the inverter pad still says 6’X22’X8’ in the plan set reviewed by this office. The final plan should be corrected.

Matrix: There was an error in the 12/13/2021 site plan submission. The proposed 01/03/2022 (on or before) submission will correct this issue.

6. The rain garden detail has been modified as requested. The applicant notes that HNGC staff will be responsible for maintenance of the rain garden. This should be included as a note on the plans.

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Matrix: A note will be placed on the site plan per Chazen's direction.

7. The applicant proposes to complete soil testing in the rain garden prior to installation. We believe the soil testing should occur prior to site plan approval in order to verify the rain garden is suitable for use in this location.

Matrix: Although the treatment area the rain garden is designed to control is insignificant, we will immediately pursue soil testing to avoid delays related to frost. Soil testing will be complete week of January 3<sup>rd</sup>, 2022. We would request this issue be completed during Site Plan review by the Planning Board.

8. The wildflower/grass seed mix appears appropriate for this project.

Matrix: No response required.

9. The use of Fend Off Deer and Rabbit Repellent Clips appears to be appropriate on this site.

Matrix: No response required.

COMMENTS ON TIM MILLER ASSOCIATES, INC. RESPONSE TO CHAZEN MEMO

Matrix: We concur with Chazen's assessment.

Thank you in advance for your consideration and review of our responses.

Regards,

A handwritten signature in black ink, appearing to read "Michael Doud".

Michael Doud  
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(518) 727-6219  
[mdoud@matrixdevllc.com](mailto:mdoud@matrixdevllc.com)