



**QUESTIONS?**  
Call or email us!

Town of Chapel Hill  
Planning Department  
919-969-5040  
[planning@townofchapelhill.org](mailto:planning@townofchapelhill.org)

|  |  |  |
|--|--|--|
| <p><b>Chapel Hill Historic District</b></p> <p><b>Certificate of Appropriateness Application</b></p>   | Project:   |  |
| <p><b>Project Description:</b></p> <p>Installation of 27 black solar panels flush mounted to the preexisting roof of the house. PV Array (A) consists of 24 South facing panels and PV Array (B) consists of 4 West facing panels. Via Opt 2 of DOI. Please see attached documentation for panel dimensions, location, &amp; example photos.</p>   | Permit:  |  |
|  | STAFF REVIEW   |  |
|  | <input type="checkbox"/> Application complete and accepted                                     |  |
|  | <input type="checkbox"/> Application not complete and returned with a notation of deficiencies |  |
| BY:  |  |  |
| DATE:  |  |  |
| <p><b>Instructions:</b> Submit one paper copy and a digital copy of all application materials collated in one file (pdf preferred)</p> <p><b>Deadlines:</b> Applications are due by the close of business 30 calendar days prior to the scheduled meeting date.</p> <p><b>Note:</b> Only complete applications may be accepted for Certificate of Appropriateness review. Applications that are not complete will be returned with a notation of deficiencies.</p> |  |  |

|  |                  |   |                            |
|--|------------------|---|----------------------------|
| <b>A: Property Information</b>   |                  |   |                            |
| <b>Property Address:</b> 208 Spring Lane,<br>Chapel Hill, NC 27514   |                  | <b>Parcel ID Number:</b>                                      |                            |
| <b>Property Owner(s):</b> Josh Gurlitz   |                  | <b>Email:</b> dhmoreau60@gmail.com                            |                            |
| <b>Property Owner Address:</b> 208 Spring Lane, Chapel Hill, NC 27514  |                  |   |                            |
| <b>City:</b> Chapel Hill   | <b>State:</b> NC | <b>Zip:</b> 27514   | <b>Phone:</b> 919-537-5875 |
| <b>Historic District:</b> <input type="checkbox"/> Cameron-McCauley <input type="checkbox"/> Franklin-Rosemary <input type="checkbox"/> Gimghoul |                  |   | <b>Zoning District:</b>    |
| <b>B: Applicant Information</b>  |                  |   |                            |
| <b>Applicant:</b> John Flanagan  |                  | <b>Role (owner, architect, other):</b> Senior Program Manager |                            |



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|   |                               |             |  |
|---|-------------------------------|-------------|--|
| <b>Address (if different from above):</b> |                               |             |  |
| <b>City:</b>                              | <b>State:</b>                 | <b>Zip:</b> |  |
| <b>Email:</b><br>HOA@ncsolarnow.com       | <b>Phone:</b><br>919-833-9096 |             |  |

**C. Application Type (check all boxes that apply)**

**Minor Work** Exterior works that do not involve any substantial alterations, and do not involve additions or removals that could impair the integrity of the property and/or the district as a whole. See [Design Guidelines](#) (p. 69) for a list of minor works.

**Historic District Commission Review** Includes all exterior changes to structures and features other than minor works

**Site-work only (walkways, fencing, walls, etc.)**       **After-the-fact application** (for unauthorized work already performed).

**Restoration or alteration**       **Demolition or moving of a site feature.**

**New construction or additions**       **Request for review of new application after previous denial**

**Sign**

**D. Basic information about size, scale, and lot placement.**

Provide measurements in feet and square feet where applicable. Where possible, please provide accurate measurements from a licensed surveyor, architect, engineer, etc. If exact measurements are not available, please provide estimated information. Current estimated information about lots and buildings can be found on the [Orange County Real Estate Data](#) website. Information about lot placement can be found on the [Chapel Hill](#) and [Orange County Interactive GIS](#) portals.

| Zoning District:            | Minimum setbacks |            |       | Maximum heights        |           |  | Lot size      |
|-----------------------------|------------------|------------|-------|------------------------|-----------|--|---------------|
|                             | Street           | Interior   | Solar | Primary                | Secondary |  |               |
| Required by zoning          |                  |            | 901   |                        |           |  |               |
| Proposed                    |                  |            | 901   |                        |           |  |               |
|                             | Existing         | Change +/- | Total | Total Floor Area Ratio |           |  |               |
| Floor Area (main structure) |                  |            |       | Existing               | Proposed  |  | ISA/NLA ratio |



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|                                      |  |  |  |  |  |                 |                 |
|--------------------------------------|--|--|--|--|--|-----------------|-----------------|
| <b>Floor Area (all other)</b>        |  |  |  |  |  | <b>Existing</b> | <b>Proposed</b> |
| <b>Impervious Surface Area (ISA)</b> |  |  |  |  |  |                 |                 |
| <b>New Land Disturbance</b>          |  |  |  |  |  |                 |                 |

**E: Applicable Design Guidelines**

The Town’s [Design Guidelines for the Chapel Hill Historic Districts](#) are integral to the application and review process. These guidelines supplement the required review criteria for Certificate of Appropriateness applications (provided in [Section 3.6.2\(e\)\(4\)](#) of the Land Use Management Ordinance) by providing detailed, practical considerations for how to make changes to properties while preserving the special character of their Historic District context. Please review the Design Guidelines and consider their applicability to your proposed project. (Attach additional sheets, as necessary.)

| Section/Page | Topic        | Brief description of the applicable aspect of your proposal  |
|--------------|--------------|--|
| pg.37 #9     | Solar Panels | The proposed installation will not compromise the architectural integrity of the residence and has been carefully designed resulting in an aesthetically pleasing PV project .     |
| pg. 49 #9    | Solar Panels | There are no front facing panels in this proposed PV project to ensure no visibility of the panels. The proposed panels will be installed on an existing roof surface of the home. |
|              |              | Please specification sheets in the comprehensive application attached.   |

**F. Checklist of Application Materials**

| <i>Attach the required elements in the order indicated.</i>   | <b>ATTACHED?<br/>TO BE<br/>COMPLETED<br/>BY<br/>APPLICANT</b> |                          | <b>TO BE COMPLETED BY<br/>TOWN STAFF</b> |                          |                          |
|---|---|--------------------------|--|--------------------------|--------------------------|
|   | <b>YES</b>  | <b>N/A</b>               | <b>YES</b>                               | <b>N/A</b>               | <b>NO</b>                |
| <b>1. Written description of physical changes proposed.</b> Describe clearly and in detail the physical changes you are proposing to make. Identify the materials to be used (siding, windows, trim, roofing, pavements, decking, fencing, light fixtures, etc.), specify their dimensions, and provide names of manufacturers, model numbers, and specifications where applicable. | <input checked="" type="checkbox"/>                           | <input type="checkbox"/> | <input type="checkbox"/>                 | <input type="checkbox"/> | <input type="checkbox"/> |



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|   |                                     |                          |                          |                          |                          |
|---|-------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <p><b>2. History, context, and character information.</b> Please include a summary of what information you have relied on to understand the relevant character and history of the district and subject property—and briefly summarize that information. At a minimum, include:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Current property information for the lot and all structures, including Building Sketches and Building Details, from <a href="#">Orange County Real Estate Data</a>.</li> <li><input type="checkbox"/> The entry of your property on the most recent inventory of historic resources in the relevant National Register for Historic Places filing, available via the NC State Historic Preservation Office website: for McCauley-Cameron see <a href="#">West Chapel Hill</a>, for Franklin-Rosemary see <a href="#">Chapel Hill Historic District</a>, for Gimghoul see <a href="#">Gimghoul</a>. (If yours is one of the few properties in McCauley-Cameron or Franklin-Rosemary that has not yet been inventoried, please indicate that.)</li> </ul>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p><b>3. Justification of appropriateness.</b> Attach an annotated statement explaining how the proposed change(s) meets the following standards of appropriateness that the Commission considers in making findings of fact indicating the extent to which the application is or is not congruous with the historic aspects of the historic district. If a standard is not applicable, type “not applicable”.</p> <ul style="list-style-type: none"> <li>A. The height of the building in relation to the average height of the nearest adjacent and opposite buildings.</li> <li>B. The setback and placement on lot of the building in relation to the average setback and placement of the nearest adjacent and opposite buildings.</li> <li>C. Exterior construction materials, including texture and pattern.</li> <li>D. Architectural detailing, such as lintels, cornices, brick bond, and foundation materials.</li> <li>E. Roof shapes, forms, and materials.</li> <li>F. Proportion, shape, positioning and location, pattern, and size of any elements of fenestration.</li> <li>G. General form and proportions of buildings and structures.</li> <li>H. Appurtenant fixtures and other features such as lighting.</li> <li>I. Structural conditions and soundness.</li> <li>J. Architectural scale.</li> </ul> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p><b>4. Photographs</b> of existing conditions are required. Minimum image size 4” x 6” as printed or the digital equivalent. Maximum 2 images per page.</p>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p><b>5. Site Plan Set</b> showing existing and proposed conditions. (Min. scale: 1 in. = 20 ft.)</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Site plans must show the relationships between, and dimensions of, existing and proposed buildings, additions, sidewalks, walls, fences, driveways, and/or other structures on the property, as well as property lines and applicable zoning setbacks.</li> <li><input type="checkbox"/> Include both written and drawn scales and show accurate measurements. You may also use a copy of a survey with surveyor’s seal deleted. Revise the copy as needed to show existing conditions and your proposed work.</li> </ul>   | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



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|   |                                     |                                     |                          |                          |                          |
|---|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|
| <p>Indicate the area of all structural footprints (existing and proposed) in square feet; also, indicate lot size in square feet.</p>   |                                     |                                     |                          |                          |                          |
| <p><b>6. Elevation Drawings</b> showing existing structural facades and proposed changes. Drawings should be submitted as 11" x 17" or 8-1/2" x 11" reductions of full-size drawings. All details should be reasonably legible. Photographs are okay for facades with no changes.</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Elevation drawings showing all proposed changes above current grade from front, back, and both sides.</li> <li><input type="checkbox"/> Include scale bar, written scale, and label major dimensions (including width of structures and heights from finished grade to fascia/eaves and heights to top of roofs).</li> <li><input type="checkbox"/> Label materials to be used (roofing, siding, windows, trim, light fixtures, etc.)</li> </ul>  | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p><b>7. Information about context</b> (required for all construction of new structures, proposed impervious surfaces greater than 1500 SF, additions greater than 150 SF, and/or proposed land disturbance greater than 5000 SF.) Detailed information about lots and structures can be found on the <a href="#">Orange County Real Estate Data</a> website; information about lot placement can be found on the <a href="#">Chapel Hill</a> and <a href="#">Orange County</a> GIS portals.</p> <p>For each of the nearest adjacent and opposite properties, provide:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> The height of each building (if an estimate, indicate that).</li> <li><input type="checkbox"/> The setbacks and lots placement of each building (an image from the Town GIS database, including scale, is sufficient).</li> <li><input type="checkbox"/> The size of each lot (net land area in square feet).</li> <li><input type="checkbox"/> The size of all buildings on the nearest adjacent and opposite properties, including building footprint areas, Floor Areas (in square feet), and Floor Area Ratios. Provide current figures from <a href="#">Orange County Real Estate Data</a>; indicate any corrections for accuracy you believe necessary and your basis for doing so.</li> </ul> | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <p><b>8. Demolition/Relocation Information</b> (required only if demolition or relocation of a feature is proposed).</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Provide a written description of architectural features, additions, remodeling, and any alterations to the structure(s). Make note of any outbuildings on the site plan of the property.</li> <li><input type="checkbox"/> Provide a history of the structure, giving the construction date and architect or carpenter, briefly noting any significant events, persons and/or families associated with the property. Provide current exterior photographs of the property (4" x 6" as printed or the digital equivalent). If information is unknown, please provide a summary of sources consulted.</li> <li><input type="checkbox"/> If an argument about structural soundness is being made, attach a signed and sealed report from a professional engineer.</li> <li><input type="checkbox"/> As necessary, attach a statement explaining how a delay in demolition would</li> </ul>  | <input type="checkbox"/>            | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |



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Planning Department

919-969-5040

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|  |                                     |  |                          |                          |                          |
|--|-------------------------------------|--|--------------------------|--------------------------|--------------------------|
| cause the property owner to suffer extreme hardship or be permanently deprived of all beneficial use or return from such property by virtue of the delay.<br><br>Provide any records about the structure to be demolished. |                                     |  |                          |                          |                          |
| 9. Mailing notification fee per <a href="#">Planning &amp; Sustainability Fee Schedule</a> . For a list of addresses, please refer to the Town's <a href="#">Development Notification Tool</a> .                           | <input checked="" type="checkbox"/> |  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10. Certificate of Appropriateness fee per <a href="#">Planning &amp; Sustainability Fee Schedule</a>  | <input checked="" type="checkbox"/> |  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

**G: Applicant signature**

I hereby certify that I am authorized to submit this application; that all information is correct to the best of my knowledge, and all work will comply with the State Building Code and all other applicable State and local laws, ordinances, and regulations.

Josh Gurlitz  
Josh Gurlitz (Jan 15, 2025 11:35 EST)



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I acknowledge and agree that the Historic District Commission members, Town employees, and Town agents may enter, solely in performance of their official duties and only at reasonable times, upon the applicant's property for examination or survey thereof pursuant to North Carolina General Statute 160A-400.8. However, no member, employee, or agent of the Historic District Commission may enter any private building or structure without the express consent of the owner or occupant thereof.

I understand and agree that an approved Certificate of Appropriateness is valid only for the particular application, plans, specifications and related project details presented to, and approved by, the Historic District Commission. If any of the data contained in this application, any plans or any specifications presented to the Commission are changed or altered for any reason, including, but not limited to, changes or alternations deemed practically necessary during construction, required due to subsequent Town reviews, or otherwise, a new hearing before the Historic District may be required. By signing below, the applicant agrees to notify the Development Services Center of any changes or alternations in the data contained in this application, the approved plans or the approved specifications related to the project that is the subject of this application.

Hearings on Certificate of Appropriateness applications before the Commission are quasi-judicial proceedings. Therefore, Historic District Commission members are not permitted to discuss a pending application with the applicant or other party. By signing below, the applicant agrees to refrain from speaking with or contacting any member of the Historic District Commission about an application outside of the formal evidentiary hearing on the application.

|                                  |  |             |
|----------------------------------|--|-------------|
| John Flanagan                    | <i>John Flanagan</i>   | 1/6/2025    |
| <b>Applicant (printed name)</b>  | <b>Signature</b><br><i>Josh Gurditz</i>                              | <b>Date</b> |
|                                  | <small><a href="#">Josh Gurditz (Jan 15, 2025 11:35 EST)</a></small> |             |
| <b>Property Owner</b>            | <b>Signature</b>   | <b>Date</b> |
| <b>(if different from above)</b> |  |             |



216 SPRING LN

210 COTTAGE LN

209 COTTAGE LN

211 FRIENDLY LN

209 FRIENDLY LN

208 COTTAGE LN

COBB TERR

214 SPRING LN

209 NORTH ST

210 SPRING LN

206 SPRING LN

206 COTTAGE LN

207 NORTH ST

212 SPRING LN

207 FRIENDLY LN UNIT B

204 FRIENDLY LN

204 COTTAGE LN

ST

208 SPRING LN

208 SPRING LN UNIT A

205 FRIENDLY LN

202 FRIENDLY LN

227 E ROSEMARY ST

HENDERSON ST

214 HENDERSON ST GARAGE

204 SPRING LN UNIT A

Friendly Ln.

223 E ROSEMARY ST

210 HENDERSON ST

Spring Ln.

202 SPRING LN

213 E ROSEMARY ST

219 E ROSEMARY ST

221-UT E ROSEMARY ST

111 PICKARD LN

211 E ROSEMARY ST

E. Rosemary Street

221-UT E ROSEMARY ST

207 E ROSEMARY ST

202 HENDERSON ST UNIT 160

202 HENDERSON ST UNIT 100

211-UT E ROSEMARY ST

218 E ROSEMARY ST

106 PICKARD LN

210 E ROSEMARY ST

Orange County North Carolina

56272  
208 SPRING LN

**JANUARY 1ST OWNER MAILING ADDRESS**  
GURLITZ HENRY JOSH TRUSTEE, GURLITZ  
ROBIN HEATH TRUSTEE  
208 SPRING LN  
CHAPEL HILL NC 27514-

Total Assessed Value  
**\$534,500**

KEY INFORMATION

|                   |  |            |                 |
|-------------------|--|------------|-----------------|
| Tax Year          | 2024                                       |            |                 |
| Parcel ID         | 9788483481                                 | Township   | 7 - CHAPEL HILL |
| Land Size         | 0.15                                       | Land Units | AC              |
| Rate Code         | 22   |            |                 |
| District Codes    | CH CHSchoolDst., G2 Chapel Hill, G0 County |            |                 |
| Property LUC      | Residential- Improved                      |            |                 |
| Neighborhood      | 7172 - 7FRANKRSMRY                         |            |                 |
| Legal Description | 3 GILES F HORNEY PROP CH TP P31/135        |            |                 |
| Exempt Type       | -  |            |                 |

APPRAISAL DETAILS

|                |           |
|----------------|-----------|
| Total Land     | \$285,000 |
| Ag Credit      | -         |
| Land           | \$285,000 |
| Building       | \$249,500 |
| Yard Items     | \$0       |
| Market Total   | \$534,500 |
| Total Assessed | \$534,500 |

RESIDENTIAL

| BUILDING (1)    |         |                |            |                |           |
|-----------------|---------|----------------|------------|----------------|-----------|
| Type            | TTF Fam | Total Value    | \$249,500  | Finished Sq Ft | 2,690 sf  |
| Style           | -       | Quality        | Grade B+05 | Condition      | Average   |
| Year Built      | 1983    | Exterior Walls | Frame      | Full Bath      | 2         |
| Roof Cover      | Metal   | Half Bath      | 0          | HVAC           | Combo H&A |
| Bedrooms        | 4       | Garage Type    | -          |                |           |
| Fireplace Count | 1       |                |            |                |           |

MISC IMPROVEMENTS

| IMPROVEMENT TYPE    | UNITS/SQ FT | EST YEAR BUILT | APPRAISED VALUE |
|---------------------|-------------|----------------|-----------------|
| No items to display |             |                |                 |

SALES

| SALE DATE  | SALE PRICE | DEED BOOK | DEED PAGE | INSTRUMENT TYPE | GRANTOR  |
|------------|------------|-----------|-----------|-----------------|----------|
| 09/12/2022 | -          | 6794      | 2262      | -               | -        |
| 05/15/1981 | \$0        | 363       | 185       | -               | SPARLING |
| 05/15/1981 | \$0        | -         | -         | -               | -        |

### YARD ITEMS

| DESCRIPTION         | TOTAL UNITS | YEAR BUILT | LENGTH | WIDTH | HEIGHT |
|---------------------|-------------|------------|--------|-------|--------|
| No items to display |             |            |        |       |        |

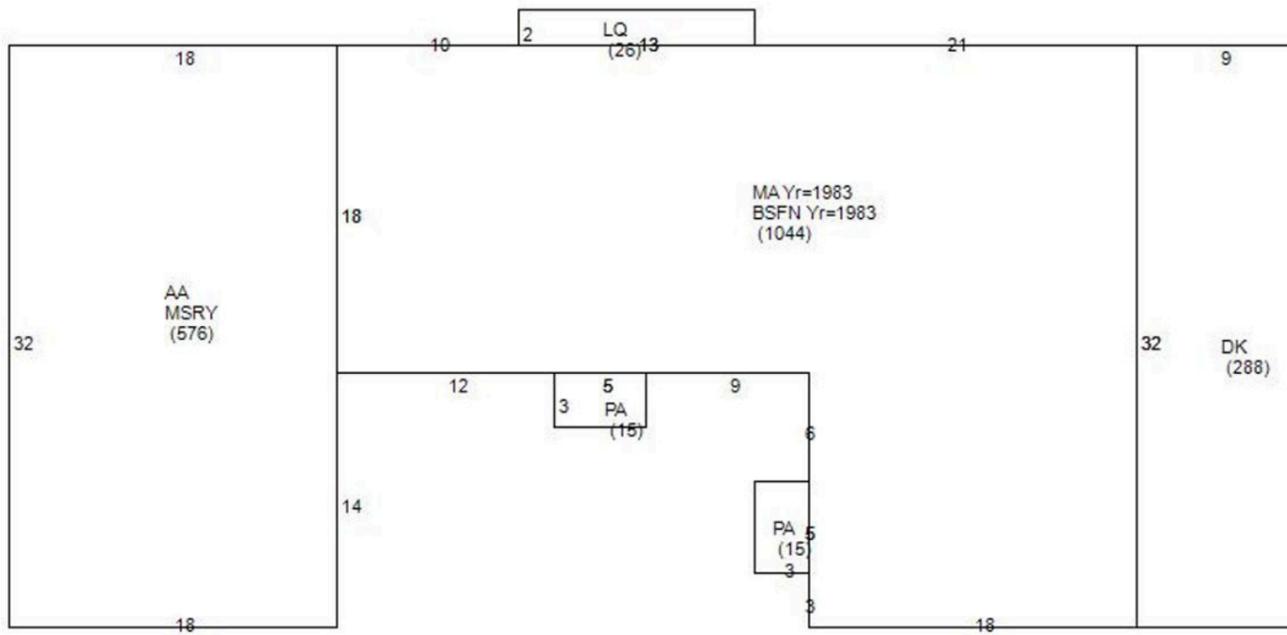
### LAND

| UNIT / SOIL TYPE | DESCRIPTION | USE CODE | ACRES / LOTS | VALUE     |
|------------------|-------------|----------|--------------|-----------|
| LOT              | Lot         | SITE     | 1.00         | \$285,000 |

### VALUE HISTORY

| YEAR | TOTAL MARKET VALUE |
|------|--------------------|
| 2024 | \$534,500          |
| 2023 | \$534,500          |
| 2022 | \$534,500          |
| 2021 | \$534,500          |
| 2020 | \$419,500          |
| 2019 | \$419,500          |
| 2018 | \$419,500          |
| 2017 | \$419,500          |
| 2016 | \$463,206          |
| 2015 | \$463,206          |
| 2014 | \$463,206          |






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### Disclaimer

Orange County Assessor's Office makes every effort to produce the most accurate information possible. **No warranties, expressed or implied, are provided for the data herein, its use or interpretation.**

## Conceptual Render



Aerial Photograph with Solar Plan Overlay

### CLIENT INFO

GURLITZ, JOSH  
208 SPRING LANE  
CHAPEL HILL, NC 27514

|                       |                        |
|-----------------------|------------------------|
| Module:               | REC ALPHA PURE RX 460W |
| Quantity:             | 27                     |
| DC Capacity:          | 12.42 kW               |
| Estimated Production: | 11,155 kWh/year        |

### Project Information

SOLAR'S MOST TRUSTED



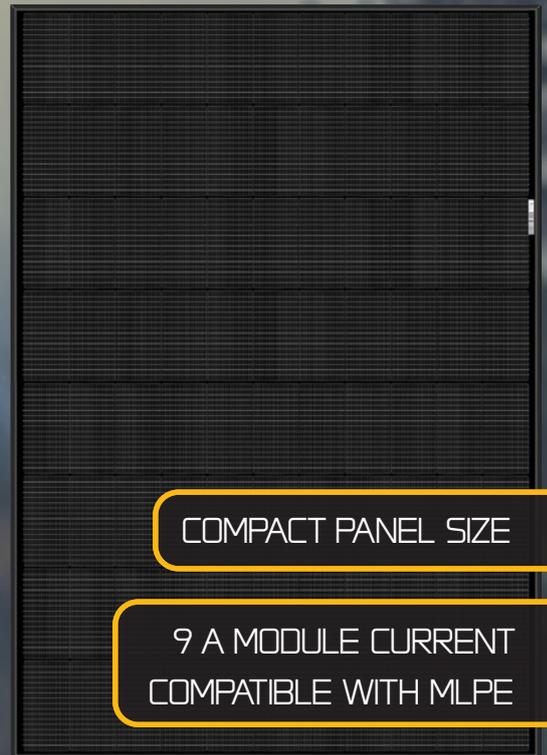
# REC ALPHA<sup>®</sup> PURE-RX SERIES

DATASHEET

470 W<sub>P</sub>

22.6% EFFICIENCY

226 W/M<sup>2</sup>



COMPACT PANEL SIZE

9 A MODULE CURRENT  
COMPATIBLE WITH MLPE



ELIGIBLE



LEAD-FREE  
ROHS COMPLIANT

EXPERIENCE



PERFORMANCE

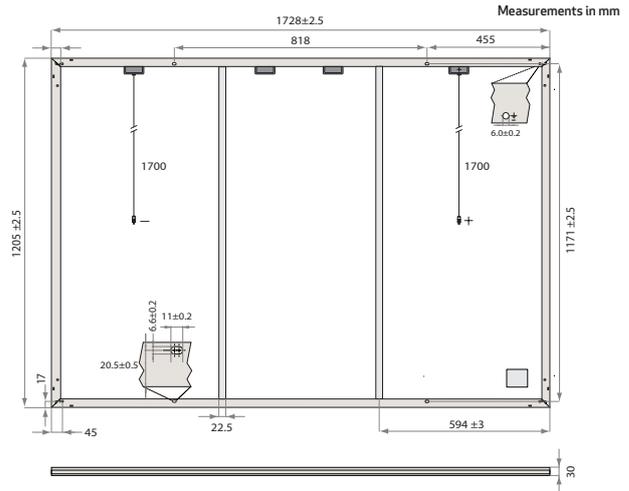
# REC ALPHA<sup>®</sup> PURE-RX SERIES

## DATASHEET



### GENERAL DATA

|              |  |
|--------------|--|
| Cell Type    | 88 half-cut bifacial REC heterojunction cells, with lead-free, gapless technology                    |
| Glass        | 3.2 mm solar glass with anti-reflective surface treatment in accordance with EN12150                 |
| Backsheet    | Highly resistant polymer (Black)   |
| Frame        | Anodized aluminum (Black)  |
| Junction Box | 4-part, 4 bypass diodes, lead-free IP68 rated, in accordance with IEC 62790                          |
| Connectors   | Stäubli MC4 PV-KBT4/KST4 (4 mm <sup>2</sup> ) in accordance with IEC 62852, IP68 only when connected |
| Cable        | 4 mm <sup>2</sup> solar cable, 1.7 m + 1.7 m in accordance with EN50618                              |
| Dimensions   | 1728 x 1205 x 30 mm (2.08 m <sup>2</sup> )   |
| Weight       | 23.4 kg  |
| Origin       | Made in Singapore  |



### ELECTRICAL DATA

PRODUCT CODE\*: RECxxxAA Pure-RX

|   | 450   | 455   | 460   | 465   | 470   |
|---|-------|-------|-------|-------|-------|
| Power Output - P <sub>MAX</sub> (W <sub>p</sub> ) | 450   | 455   | 460   | 465   | 470   |
| Watt Class Sorting - (W)                          | 0/+5W | 0/+5W | 0/+5W | 0/+5W | 0/+5W |
| Nominal Power Voltage - V <sub>MPP</sub> (V)      | 54.3  | 54.6  | 54.9  | 55.2  | 55.4  |
| Nominal Power Current - I <sub>MPP</sub> (A)      | 8.29  | 8.34  | 8.38  | 8.43  | 8.49  |
| Open Circuit Voltage - V <sub>OC</sub> (V)        | 65.1  | 65.2  | 65.3  | 65.5  | 65.6  |
| Short Circuit Current - I <sub>SC</sub> (A)       | 8.81  | 8.84  | 8.88  | 8.91  | 8.95  |
| Power Density (W/m <sup>2</sup> )                 | 216   | 219   | 221   | 224   | 226   |
| Panel Efficiency (%)                              | 21.6  | 21.9  | 22.1  | 22.3  | 22.6  |

STC

|   |      |      |      |      |      |
|---|------|------|------|------|------|
| Power Output - P <sub>max</sub> (W <sub>p</sub> ) | 343  | 346  | 350  | 354  | 358  |
| Nominal Power Voltage - V <sub>MPP</sub> (V)      | 51.2 | 51.4 | 51.7 | 52.0 | 52.2 |
| Nominal Power Current - I <sub>MPP</sub> (A)      | 6.70 | 6.73 | 6.77 | 6.81 | 6.86 |
| Open Circuit Voltage - V <sub>OC</sub> (V)        | 61.3 | 61.5 | 61.6 | 61.7 | 61.8 |
| Short Circuit Current - I <sub>SC</sub> (A)       | 7.11 | 7.14 | 7.17 | 7.2  | 7.23 |

NMOT

Values at standard test conditions (STC: air mass AM1.5, irradiance 1000 W/m<sup>2</sup>, temperature 25°C), based on a production spread with a tolerance of P<sub>MAX</sub>, V<sub>OC</sub> & I<sub>SC</sub> ±3% within one watt class. Nominal module operating temperature (NMOT: air mass AM1.5, irradiance 800 W/m<sup>2</sup>, temperature 20°C, wind speed 1 m/s). \* Where xxx indicates the nominal power class (P<sub>MAX</sub>) at STC above.

### MAXIMUM RATINGS

|                           |                                   |
|---------------------------|-----------------------------------|
| Operational Temperature   | -40 °C - 85 °C                    |
| System Voltage            | 1000 V                            |
| Maximum Test Load (front) | +7000 Pa (713 kg/m <sup>2</sup> ) |
| Maximum Test Load (rear)  | -4000 Pa (407 kg/m <sup>2</sup> ) |
| Max Series Fuse Rating    | 25 A                              |
| Max Reverse Current       | 25 A                              |

\* See installation manual for mounting instructions.  
Design load = Test load / 1.5 (safety factor)

### TEMPERATURE RATINGS\*

|   |             |
|---|-------------|
| Nominal Module Operating Temperature        | 44 °C ± 2°C |
| Temperature coefficient of P <sub>MAX</sub> | -0.24% / °C |
| Temperature coefficient of V <sub>OC</sub>  | -0.24% / °C |
| Temperature coefficient of I <sub>SC</sub>  | 0.04% / °C  |

\*The temperature coefficients stated are linear values

### DELIVERY INFORMATION

|   |                  |
|---|------------------|
| Panels per Pallet                       | 33               |
| Panels per 40 ft GP/high cube container | 594 (18 Pallets) |
| Panels per 13.6 m truck                 | 660 (20 Pallets) |

### CERTIFICATIONS

|  |                                    |
|--|------------------------------------|
| IEC 61215:2021; IEC61730:2016; UL61730 |                                    |
| ISO 11925-2                            | Ignitability (EN 13501-1 Class E)  |
| IEC 62716                              | Ammonia Resistance                 |
| IEC 61701                              | Salt Mist (SM6)                    |
| IEC 61215:2016                         | Hailstone (35 mm)                  |
| UL 61730                               | Fire Type 2                        |
| IEC 62321                              | Lead-free acc. to RoHS EU 863/2015 |
| ISO 14001; ISO9001; IEC45001; IEC62941 |                                    |



Declare.

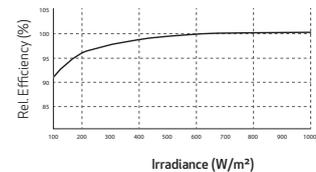
### WARRANTY

|  | Standard | REC ProTrust |           |
|--|----------|--------------|-----------|
| Installed by an REC Certified Professional | No       | Yes          | Yes       |
| System Size                                | All      | <25 kW       | 25-500 kW |
| Product Warranty (yrs)                     | 20       | 25           | 25        |
| Power Warranty (yrs)                       | 25       | 25           | 25        |
| Labor Warranty (yrs)                       | 0        | 25           | 10        |
| Power in Year 1                            | 98%      | 98%          | 98%       |
| Annual Degradation                         | 0.25%    | 0.25%        | 0.25%     |
| Power in Year 25                           | 92%      | 92%          | 92%       |

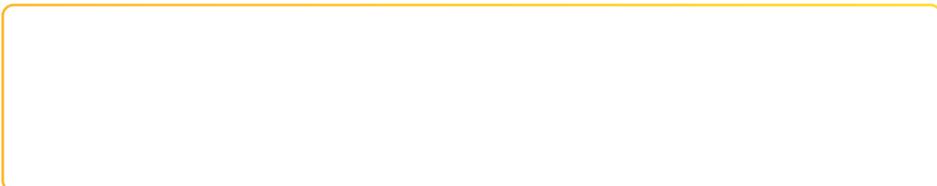
The REC ProTrust Warranty is only available on panels purchased through an REC Certified Solar Professional installer. Warranty conditions apply. See [www.recgroup.com](http://www.recgroup.com) for more details

### LOW LIGHT BEHAVIOUR

Typical low irradiance performance of module at STC:



Available from:



Founded in 1996, REC Group is an international pioneering solar energy company dedicated to empowering consumers with clean, affordable solar power. As Solar's Most Trusted, REC is committed to high quality, innovation, and a low carbon footprint in the solar materials and solar panels it manufactures. Headquartered in Norway with operational headquarters in Singapore, REC also has regional hubs in North America, Europe, and Asia-Pacific.

REC Solar PTE. LTD.  
20 Tuas South Ave. 14  
Singapore 637312  
[post@recgroup.com](mailto:post@recgroup.com)  
[www.recgroup.com](http://www.recgroup.com)



Specifications subject to change without notice.

Ref: PM-DS-12-06-Rev-4.2 3.2024



QUESTIONS?  
Call or email us!

Town of Chapel Hill  
Planning Department  
919-969-5040  
[planning@townofchapelhill.org](mailto:planning@townofchapelhill.org)

## Certificate of Appropriateness Supplemental Requirements

**\*In addition to [Residential](#) Zoning OR [Administrative](#) Zoning Compliance Permit Requirements**

Certificate of Appropriateness applications are subject to review and approval by the Historic District Commission as well as by Town staff. For assistance with this application, please contact the Chapel Hill Planning Department.

---

**Please submit *all* materials listed on this sheet.** The Historic District Commission meets on the second Tuesday of each month at 6:30 pm. For confirmation of a meeting date and the placement of your request on the agenda, please call the Planning Department. **Applications are due one month in advance of meeting.**

---

### Application Process:

1. Historic District Commission Review of Certificate of Appropriateness (COA) Supplemental materials
2. Staff review of Residential / Administrative Zoning Compliance Permit (ZCP) materials

\*\*COA (step 1) and ZCP (step 2) materials may be submitted simultaneously or separately.

---

### Required Application Materials

(In addition to [Residential](#) Zoning Compliance Permit or [Administrative](#) Zoning Compliance Permit Requirements)

**An Electronic copy of each document is required in addition to paper copies.**

**Provide a single set of the following materials:**

- |  |  |
|--|--|
|  | 1. <b>Application Form.</b> Either <a href="#">Residential</a> Zoning Compliance or <a href="#">Administrative</a> Zoning Compliance.  |
|  | 2. <b>Recorded plat or deed verifying property's current ownership</b>   |
|  | 3. <b>Recorded plat of easements, right-of-way, and dedications,</b> if applicable   |
|  | 4. <a href="#">Mailing List of Property Owners</a> , applicable within 100 feet of property boundaries<br>The Town will prepare a formal notice to be mailed to surrounding property owners about the application. You may find it helpful to discuss the proposed changes with your neighbors in person so you can address their concerns both in your planning and presentation. |
|  | 5. <b>Mailing notification fee.</b> The fee per address can be found on the <a href="#">Planning Department's Fee Schedule</a> .   |
|  | 6. <b>Certificate of Appropriateness fee per <a href="#">Planning Department's Fee Schedule</a></b>  |
|  | 7. <b>Reduced Site Plan Set (reduced to 8.5" x 11")</b>  |
|  | 8. <b>Building Elevations</b> (label building height from top of roof to finished grade line)  |
|  | 9. <b>Floor Plan</b> , only if accessory apartment, duplex, or commercial application.   |



**QUESTIONS?**  
Call or email us!



**(Continued)**

**10. Written Description**

Describe all proposed changes to the property, list all materials to be used, and address the criteria (listed below) that the Commission uses to determine appropriateness. Presenting your proposal with these criteria in mind will provide a clear basis for the Commission's deliberations.

- a) The height of the building in relation to the average height of the nearest adjacent and opposite buildings;
- b) The setback and placement of the building on the lot in relation to the average setback and placement of the nearest adjacent and opposite buildings;
- c) The exterior construction materials, including textures and patterns;
- d) The architectural detailing such as lintels, cornices, brick bond, and foundation materials;
- e) The roof shape, form, and materials;
- f) The proportion, shape, location, pattern, and size of any elements of fenestration (windows, doors);
- g) The general form and proportion of the buildings;
- h) The accessory fixture and other features (including lighting fixtures, hardware, awnings, etc.);
- i) The architectural scale in relation to existing structures and surrounding buildings; and
- j) Structural conditions and soundness.

Provide photographs of existing property and elevation drawings of the proposed changes. Depict changes in as much detail as possible, paying special attention to those features which the Commission uses to determine appropriateness. This section of the application allows the Commission to see the current state of the property, to visualize the proposed changes, and to assess the impact. The visual description must include dimensions. For new buildings and major additions, the visual description must include the interior floor plan.

**11. Information Regarding Surrounding Properties**

For new construction or large projects, the applicant is required to provide information on:

- The height of the nearest adjacent and opposite buildings;
- The setback and placement of the nearest adjacent and opposite buildings;
- The scale of the nearest adjacent and opposite buildings, including percentage of lot coverage.

**12. Demolition Information (if applicable)**

Provide a description of architectural features, additions, remodeling, and any alterations to the structure(s). Make note of any outbuildings on the site plan of the property. Provide a history of the structure, giving the construction date and architect or carpenter, briefly noting any significant events, persons, and/or families associate with the property.



## Orange County Solid Waste Management Recyclable Material Permit Application

(Applies to the Town of Carrboro, Town of Chapel Hill, Town of Hillsborough and rural Orange County)  
For additional information go to our webpage at <http://orangecountync.gov/recycling>



### Please read and understand the following terms:

- A Recyclable Material (RM) Permit is required for all projects and is tied to the issuance of your building or demo permit.
- ***Incomplete and/or unsigned and dated RM permit applications will not be considered & will be returned resulting in a delay of the issuance of your building or demolition permit.***
- The permit applies only to the project listed below and is valid for as long as the related building or demo permit is active.
- ***Not following permit conditions is a violation of the Regulated Recyclable Materials Ordinance (RRMO) and may result in criminal or civil penalties and may result in the loss of Recyclable Material Collector's License, if applicable.***
- A collector's license is required for hauling regulated construction & demolition debris in vehicles larger than 9,000 lbs. GVW. For additional information on hauler licensing see our web-page at: <http://orangecountync.gov/recycling>.
- ***All structures 500 SF or larger that will be demolished require a deconstruction assessment BEFORE the demo permit can be issued. Contact Orange County Solid Waste Enforcement staff at 919-968-2788 to arrange for the assessment.***
- Regulated material management requirements include:
  1. **Clean wood waste** (not painted, stained, treated), **scrap metal**, and **corrugated cardboard** must be recycled and cannot be landfilled. Facilities exist at the Orange County C&D Landfill to recycle these materials at reduced or no tip fee so long as they are kept separate and can be off-loaded separately by the hauler. **If the materials are comingled together, a penalty of double the tip fee will apply since we do not have the ability to separate them out.**
  2. Certified C&D material reclamation facilities (MRF's) may be used as an alternate to source separation or bringing them to the Orange County C&D landfill. **For a current list of certified facilities, please contact the Enforcement Officer of Orange County Solid Waste Management at 919-968-2788.**
  3. ***C&D materials may not be disposed of through burning.***
  4. Land clearing inert debris (LCID; vegetative debris) cannot be burned and may be brought to the Orange County C&D landfill for recycling at reduced tip fees (currently \$18/ton).
  5. Appliances and tires are banned from all landfills in NC and facilities exist at the Orange County C&D landfill for recycling these items at reduced tip fees.
- *Solid Waste enforcement staff may enter the job site to observe if any regulated recyclable materials are being placed in waste containers with other C&D waste materials and if so, a Verification Tag will be placed on the container which must be given to the scalehouse operator at the certified facility where the container must be taken.*
- The RM permit shall be kept on the job and in the permit box for the duration of the project.
- **For questions contact the Enforcement Officer at Orange County Solid Waste at 919-968-2788.**

### I have read, understand, and agree to comply with the terms of the Recyclable Material Permit:

Josh Gurlitz

Josh Gurlitz (Jan 15, 2025 11:35 EST)

#### Applicant Information:

Project address: 208 Spring Lane, Chapel Hill, NC 27514 PIN #: \_\_\_\_\_

Applicant: Josh Gurlitz Owner: Josh Gurlitz

Project Address: 208 Spring Lane, Chapel Hill, NC 27514 Owner Address (If different): \_\_\_\_\_  
27514

Contact #: 919-537-5875 Contact # 919-537-5875

Job Summary: Installation of 27 black solar panels flush mounted to the preexisting roof of the house. Please see attached documentation for panel dimensions, location, & example photos

#### Check method of waste collection & hauling you will use:

#### Check method of waste collection & hauling you will use:

Check here if HOMEOWNER is HAULING (self-hauling)

Check here if JOBSITE SEPARATION OCCURS AND MATERIALS DELIVERED TO MARKET

Check here if BUILDER/CONTRACTOR is HAULING. Builder/contractor may need to be licensed. (Contact the Enforcement Officer at Orange County Solid Waste at 919-968-2788 for guidance) **Builder or contractor hauling is NOT self-hauling.**

Check here if HAULING to a Certified Facility

Check here if using a LICENSED HAULER AND PROVIDE COMPANY NAME: \_\_\_\_\_

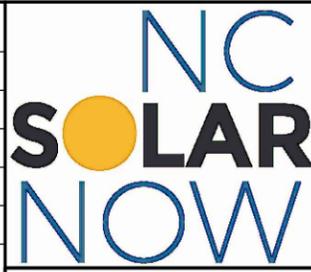
#### FOR OFFICE USE ONLY

Approved by: \_\_\_\_\_ Date: \_\_\_\_\_

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| PV MATERIAL SUMMARY: DISTRIBUTOR |     |
|----------------------------------|-----|
| REC460AA PURE-RX                 | 27  |
| MCI-2                            | 14  |
| Tesla PW3 1707000-xx-y           | 1   |
| Tesla GW3 1841000-01-y           | 1   |
| XR-10-168B                       | 4   |
| XR-10-204B                       | 10  |
| XR10-BOSS-01-M1                  | 8   |
| UFO-CL-01-B1                     | 44  |
| UFO-END-01-B1                    | 20  |
| XR-LUG-03-A1                     | 7   |
| SOLARFOOT                        | 158 |
| TYPE 17-AB, SCREW (2.5")         | 632 |
| LFT-03-M1                        | 158 |
| QM-JBX-RL02-B1                   | 2   |
| SOLAR MESH-P-8                   | 2   |
| SNRAC 242-04105                  | 75  |



**CLIENT INFO**  
 JOSH GURLITZ  
 208 SPRING LN  
 CHAPEL HILL NC 27514

**PROJECT INFO**  
 DC INPUT: 12.420 kW  
 AC OUTPUT: 11.500 kW  
 DOI INSP. METHOD: OPTION 2

**Model Energy**  
 300 Fayetteville St.  
 #1430  
 Raleigh, NC 27602  
 919-274-9905  
 ModelEnergy.com  
 P-1194



**CODE REFERENCES**  
 NATION ELECTRICAL CODE v. 2017  
 NC FIRE PROTECTION CODE v. 2018  
 NC BUILDING CODE v. 2018  
 NC RESIDENTIAL CODE v. 2018  
 ACSE v. 7-10

**SITE CONDITIONS**  
 WIND SPEED: 120 MPH  
 RISK CATEGORY: II  
 EXPOSURE: B  
 SNOW: 15 PSF

**SHEET INDEX**  
 PV-1: COVER SHEET  
 PV-2: PV STRUCTURAL  
 PV-3: PV ELECTRICAL  
 PV-4: PV EQUIPMENT LABELS  
 PV-5: PV INSTALL GUIDE

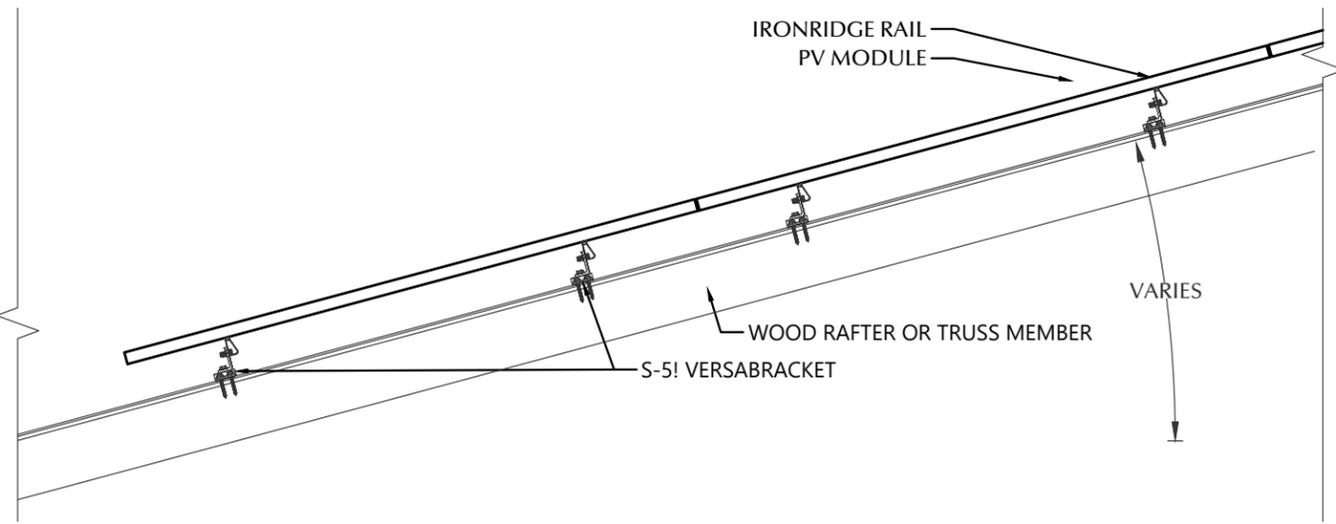
| VERSIONS     |          |          |
|--------------|----------|----------|
| FOR:         | DESIGNER | DATE     |
| CONSTRUCTION | MCP      | 1/8/2025 |

PV SYSTEM COVER PAGE

**PV-1.1**


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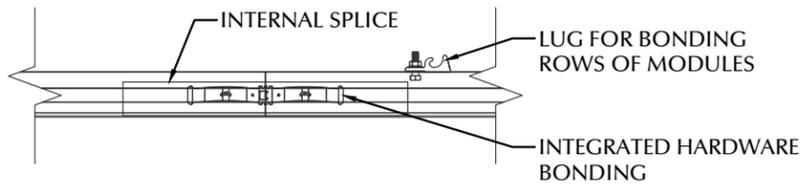


**STATEMENT OF STRUCTURAL COMPLIANCE**

THE EXISTING ROOF STRUCTURE HAS BEEN DESIGNED TO SUPPORT THE ADDITIONAL LOADS OF THE PROPOSED PV SYSTEM. IN ADDITION, THE RACKING AND FASTENING SYSTEM SHALL BE CAPABLE OF SECURING THE SYSTEM TO THE STRUCTURE UNDER DESIGN CONDITIONS WHEN INSTALLED PROPERLY AND IN ACCORDANCE WITH THE RACKING AND FASTENING ARRANGEMENT DETAILED WITHIN THESE DRAWINGS.

NAME: ANDREW W. KING, PE

SIGNED:



| PV MODULES   |                  |
|--------------|------------------|
| MAKE         | REC              |
| MODEL        | REC460AA PURE-RX |
| WIDTH        | 48.10 IN         |
| LENGTH       | 68.00 IN         |
| THICKNESS    | 30 MM            |
| WEIGHT       | 51.59 LBS.       |
| ARRAY AREA   | 522 SQFT.        |
| ARRAY WEIGHT | 1306 LBS.        |

| ROOF SUMMARY   |                        |
|----------------|------------------------|
| STRUCTURE:     |                        |
| TYPE           | TRUSSES                |
| MATERIAL       | SOUTHERN PINE #2       |
| SIZE           | 2 X 4                  |
| SPACING        | 24 IN O.C.             |
| ALLOWABLE SPAN | 88 IN                  |
| PITCH          | 8/12                   |
| DENSITY        | 30 LBS./CU.FT.         |
| DECKING:       |                        |
| TYPE           | PLYWOOD                |
| MATERIAL       | COMPOSITE              |
| THICKNESS      | 8/16 IN                |
| WEIGHT         | 1.42 LBS./SQFT         |
| ROOFING:       |                        |
| TYPE           | EXPOSED FASTENER METAL |
| MATERIAL       | METAL                  |
| WEIGHT         | 1.30 LBS./SQFT.        |



**CLIENT INFO**  
 JOSH GURLITZ  
 208 SPRING LN  
 CHAPEL HILL NC 27514

**PROJECT INFO**  
 DC INPUT: 12.420 kW  
 AC OUTPUT: 11.500 kW  
 DOI INSP. METHOD: OPTION 2

**Model Energy**  
 300 Fayetteville St.  
 #1430  
 Raleigh, NC 27602  
 919-274-9905  
 ModelEnergy.com  
 P-1194



**CODE REFERENCES**  
 NATION ELECTRICAL CODE v. 2017  
 NC FIRE PROTECTION CODE v. 2018  
 NC BUILDING CODE v. 2018  
 NC RESIDENTIAL CODE v. 2018  
 ACSE v. 7-10

**SITE CONDITIONS**  
 WIND SPEED: 120 MPH  
 RISK CATEGORY: II  
 EXPOSURE: B  
 SNOW: 15 PSF

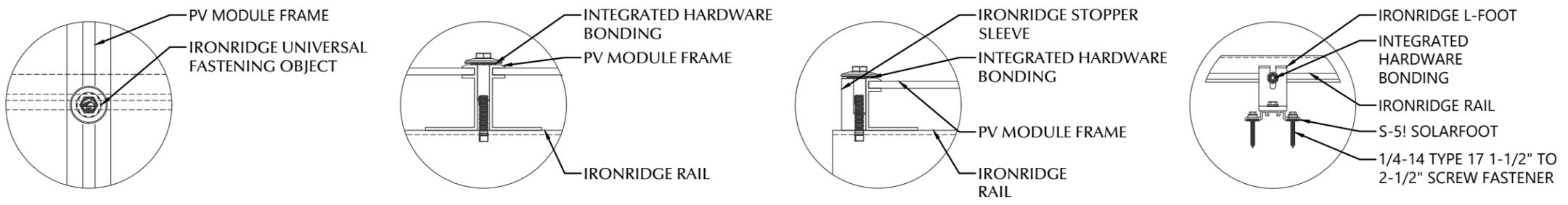
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**VERSIONS**

| FOR:         | DESIGNER: | DATE:    |
|--------------|-----------|----------|
| CONSTRUCTION | MCP       | 1/8/2025 |

**PV SYSTEM STRUCTURAL**

**PV-2.1**



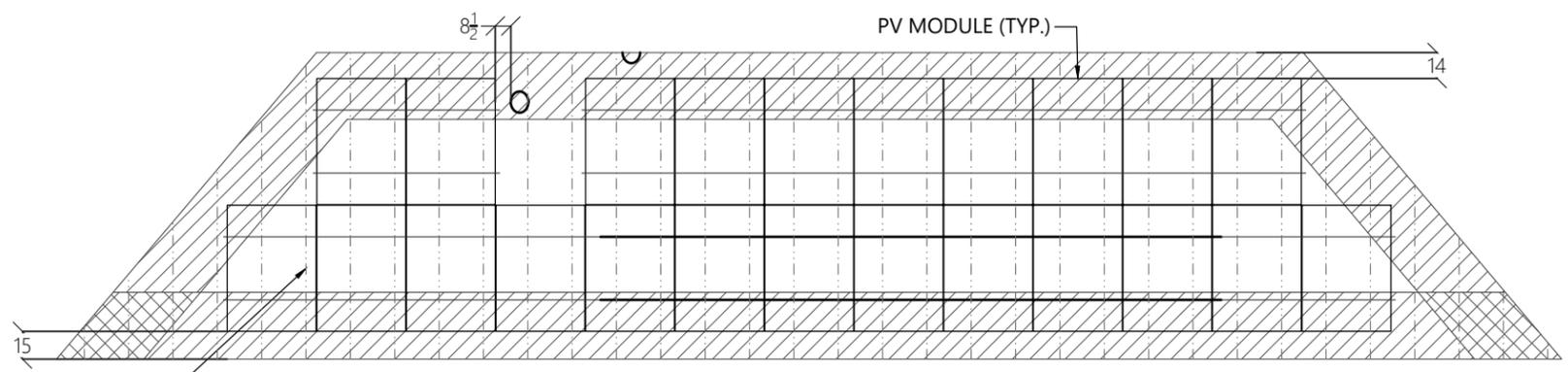
**1 ROOF FASTENER DETAIL**  
 NOT TO SCALE

| ROOF MOUNT SUMMARY         |               |       |
|----------------------------|---------------|-------|
| MAXIMUM (IN) MOUNT SPACING | RAIL OVERHANG |       |
| WIND ZONE 1                | 30 IN         | 12 IN |
| WIND ZONE 2                | 23 IN         | 9 IN  |
| WIND ZONE 3                | 20 IN         | 8 IN  |

| ROOF LOADING      |                  |
|-------------------|------------------|
| GROUND SNOW LOAD: | 15 LBS./SQFT.    |
| LIVE LOAD         | 20 LBS./SQFT.    |
| DEAD LOAD         |                  |
| ROOFING           | 3.9 LBS./SQFT.   |
| PV ARRAY          | 2.5 LBS./SQFT.   |
| TOTAL             | 6.4 LBS./SQFT.   |
| WIND LOAD:        |                  |
| UPLIFT ZONE 1     | -24.6 LBS./SQFT. |
| UPLIFT ZONE 2     | -29.0 LBS./SQFT. |
| UPLIFT ZONE 3     | -29.0 LBS./SQFT. |
| DOWNWARD          | 23.0 LBS./SQFT.  |
| FASTENER LOAD:    |                  |
| UPLIFT ZONE 1     | -173 LBS.        |
| UPLIFT ZONE 2     | -156 LBS.        |
| UPLIFT ZONE 3     | -136 LBS.        |
| DOWNWARD          | 162 LBS.         |

| ROOF MOUNT & FASTENER |                              |
|-----------------------|------------------------------|
| ROOF MOUNT:           |                              |
| MAKE                  | S-51                         |
| MODEL                 | SOLARFOOT                    |
| MATERIAL              | ALUMINUM / BUTYL             |
| FASTENER:             |                              |
| MAKE                  | S-51                         |
| MODEL                 | TYPE 17-AB, SCREW (2.5")     |
| MATERIAL              | ZINC / ALUMINUM CAP          |
| SIZE                  | 1/4 - 14 X 2-1/2" (3/8" HEX) |
| GENERAL:              |                              |
| WEIGHT                | 0.17 LBS.                    |
| FASTENERS PER MOUNT   | 4                            |
| MAX. PULL-OUT FORCE   | 356.0 LBS.                   |
| SAFETY FACTOR         | 2                            |
| DESIGN PULL-OUT FORCE | 178.0 LBS.                   |

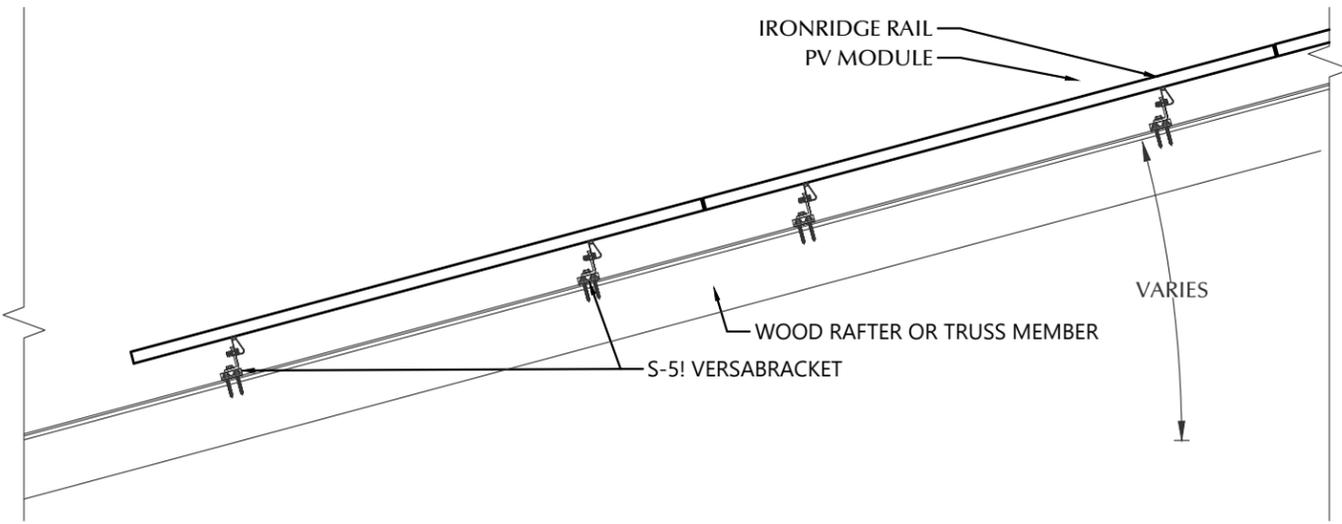
| MOUNTING RAILS |              |
|----------------|--------------|
| MAKE           | IRONRIDGE    |
| MODEL          | XR10         |
| MATERIAL       | ALUMINUM     |
| WEIGHT         | 0.425 LBS/IN |
| SPACING        | 34 IN        |



**2 ROOF A ARRAY LAYOUT**  
 1/8" = 1'-0"

ROOF STRUCTURAL MEMBER (TYP.)  
 24" O.C.

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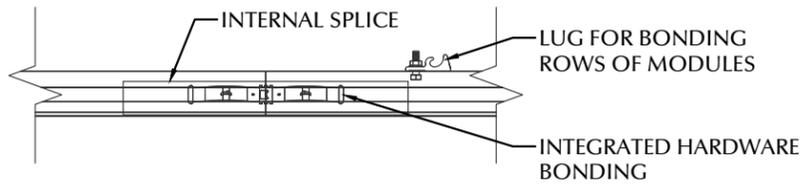


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NAME: ANDREW W. KING, PE

SIGNED:



| PV MODULES   |                  |
|--------------|------------------|
| MAKE         | REC              |
| MODEL        | REC460AA PURE-RX |
| WIDTH        | 48.10 IN         |
| LENGTH       | 68.00 IN         |
| THICKNESS    | 30 MM            |
| WEIGHT       | 51.59 LBS.       |
| ARRAY AREA   | 91 SQFT.         |
| ARRAY WEIGHT | 227 LBS.         |

| ROOF SUMMARY   |                        |
|----------------|------------------------|
| STRUCTURE:     | TRUSSES                |
| TYPE           | SOUTHERN PINE #2       |
| MATERIAL       | 2 X 4                  |
| SIZE           | 24 IN O.C.             |
| SPACING        | 88 IN                  |
| ALLOWABLE SPAN | 8/12                   |
| PITCH          | 30 LBS./CU.FT.         |
| DENSITY        | PLYWOOD                |
| DECKING:       | COMPOSITE              |
| TYPE           | 8/16 IN                |
| MATERIAL       | 1.42 LBS./SQFT         |
| THICKNESS      | ROOFING:               |
| WEIGHT         | EXPOSED FASTENER METAL |
| ROOFING:       | METAL                  |
| TYPE           | 1.30 LBS./SQFT.        |
| MATERIAL       |                        |
| WEIGHT         |                        |



**CLIENT INFO**  
 JOSH GURLITZ  
 208 SPRING LN  
 CHAPEL HILL NC 27514

**PROJECT INFO**  
 DC INPUT: 12.420 kW  
 AC OUTPUT: 11.500 kW  
 DOI INSP. METHOD: OPTION 2

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**SITE CONDITIONS**  
 WIND SPEED: 120 MPH  
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| VERSIONS     |          |          |
|--------------|----------|----------|
| FOR:         | DESIGNER | DATE     |
| CONSTRUCTION | MCP      | 1/8/2025 |

**PV SYSTEM STRUCTURAL**

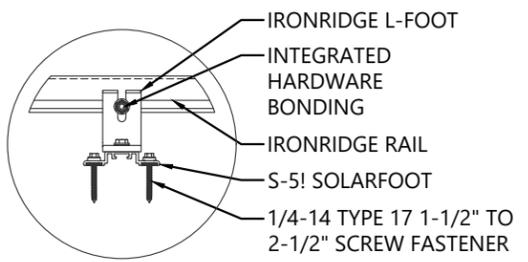
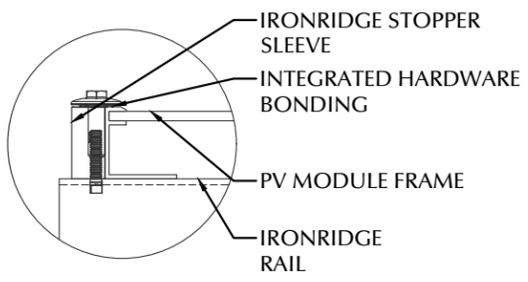
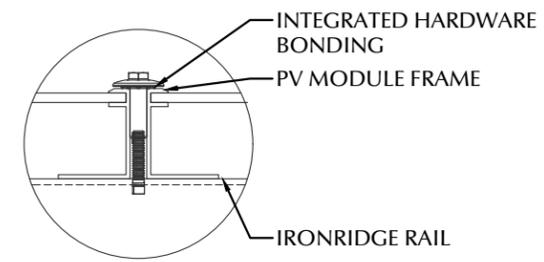
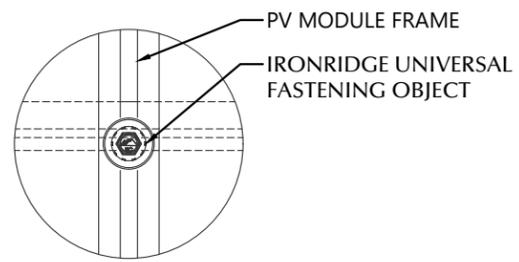
**PV-2.2**

| ROOF MOUNT SUMMARY         |               |       |
|----------------------------|---------------|-------|
| MAXIMUM (IN) MOUNT SPACING | RAIL OVERHANG |       |
| WIND ZONE 1                | 30 IN         | 12 IN |
| WIND ZONE 2                | 23 IN         | 9 IN  |
| WIND ZONE 3                | 20 IN         | 8 IN  |

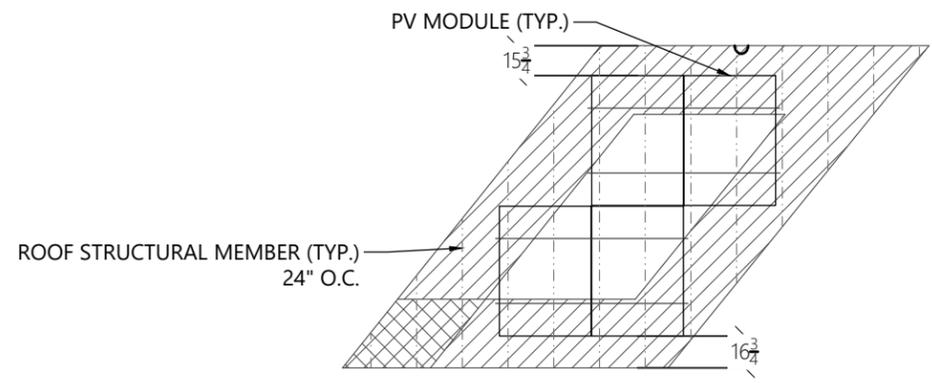
| ROOF LOADING      |                  |
|-------------------|------------------|
| GROUND SNOW LOAD: | 15 LBS./SQFT.    |
| LIVE LOAD         | 20 LBS./SQFT.    |
| DEAD LOAD         |                  |
| ROOFING           | 3.9 LBS./SQFT.   |
| PV ARRAY          | 2.5 LBS./SQFT.   |
| TOTAL             | 6.4 LBS./SQFT.   |
| WIND LOAD:        |                  |
| UPLIFT ZONE 1     | -24.6 LBS./SQFT. |
| UPLIFT ZONE 2     | -29.0 LBS./SQFT. |
| UPLIFT ZONE 3     | -29.0 LBS./SQFT. |
| DOWNWARD          | 23.0 LBS./SQFT.  |
| FASTENER LOAD:    |                  |
| UPLIFT ZONE 1     | -173 LBS.        |
| UPLIFT ZONE 2     | -157 LBS.        |
| UPLIFT ZONE 3     | -136 LBS.        |
| DOWNWARD          | 162 LBS.         |

| ROOF MOUNT & FASTENER |                              |
|-----------------------|------------------------------|
| ROOF MOUNT:           |                              |
| MAKE                  | S-5!                         |
| MODEL                 | SOLARFOOT                    |
| MATERIAL              | ALUMINUM / BUTYL             |
| FASTENER:             |                              |
| MAKE                  | S-5!                         |
| MODEL                 | TYPE 17-AB, SCREW (2.5")     |
| MATERIAL              | ZINC / ALUMINUM CAP          |
| SIZE                  | 1/4 - 14 X 2-1/2" (3/8" HEX) |
| GENERAL:              |                              |
| WEIGHT                | 0.17 LBS.                    |
| FASTENERS PER MOUNT   | 4                            |
| MAX. PULL-OUT FORCE   | 356.0 LBS.                   |
| SAFETY FACTOR         | 2                            |
| DESIGN PULL-OUT FORCE | 178.0 LBS.                   |

| MOUNTING RAILS |              |
|----------------|--------------|
| MAKE           | IRONRIDGE    |
| MODEL          | XR10         |
| MATERIAL       | ALUMINUM     |
| WEIGHT         | 0.425 LBS/IN |
| SPACING        | 34 IN        |



**1 ROOF FASTENER DETAIL**  
 NOT TO SCALE



**2 ROOF B ARRAY LAYOUT**  
 1/8" = 1'-0"

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### CONDUCTOR SCHEDULE

| TAG | CURRENT CARRYING CONDUCTORS |                  |            | GROUNDING CONDUCTORS |        |            | CONDUIT/RACEWAY |      |          | NOTES |
|-----|-----------------------------|------------------|------------|----------------------|--------|------------|-----------------|------|----------|-------|
|     | QTY.                        | SIZE             | INSULATION | QTY.                 | SIZE   | INSULATION | QTY.            | SIZE | LOCATION |       |
| C1  | 10                          | 10 AWG           | PV WIRE    | 1                    | 6 AWG  | BARE       | -               | -    | FREE AIR | 1     |
| C2  | 10                          | 10 AWG           | THWN-2     | 1                    | 10 AWG | THWN-2     | 1               | 3/4" | EXT/INT  | 2,4   |
| C3  | 3                           | 6 AWG            | THWN-2     | 1                    | 10 AWG | THWN-2     | 1               | 1"   | EXTERIOR | 2,4   |
| C4  | 3                           | 4/0 AWG ALUMINUM | XHHW       | 1                    | 6 AWG  | THWN-2     | 1               | 2"   | EXT/INT  | 2,4   |
| C5  | 3                           | 4/0 AWG ALUMINUM | XHHW       | -                    | -      | -          | 1               | 2"   | EXTERIOR | 2,4   |
| XC  | -                           | -                | -          | -                    | -      | -          | -               | -    | -        | 3     |

**NOTES:**

- MANUFACTURER PROVIDED, UL LISTED WIRING HARNESS FOR USE ON EXPOSED ROOFS
- CONDUIT SIZE SHOWN IS CODE MINIMUM. LARGER SIZES ARE ALLOWED.
- EXISTING CONDUCTORS, FIELD VERIFY
- EQUIPMENT TERMINAL RATING SHALL BE A MINIMUM OF 75°C AT BOTH END OF CONDUCTOR

### ENERGY MANAGEMENT

| MAKE                | TESLA            |
|---------------------|------------------|
| MODEL               | BACKUP GATEWAY 3 |
| ENCL. RATING        | NEMA 3R          |
| VOLT. RATING        | 240 VOLTS        |
| DISCONNECT CURR.    | 200 AMPS         |
| UL LIST. (Y/N)      | YES              |
| MAIN BREAKER (Y/N)  | YES              |
| MAIN BREAKER RATING | 200 AMPS         |

- TROUGH MAY BE USED IF NECESSARY
- INSTALL 200A MAIN BREAKER THAT WILL SERVE AS THE NEW SERVICE DISCONNECT SWITCH
- INSTALL BONDING JUMPER FROM NEUTRAL TO GROUND
- FEED BACKED-UP LOADS PANEL VIA BACKUP LUGS
- LAND POWERWALL 3 ON 60A BREAKER IN EXISTING GATEWAY INTERNAL PANELBOARD

### PV MODULE

| MAKE               | REC              |
|--------------------|------------------|
| MODEL              | REC460AA PURE-RX |
| NOM. POWER (PNOM)  | 460 WATTS        |
| NOM. VOLT. (VMPP)  | 54.9 VOLTS       |
| O.C. VOLT (VOC)    | 65.3 VOLTS       |
| MAX. SYS. VOLT.    | 1000 VOLTS       |
| NOM. CURR. (IMPP)  | 8.4 AMPS         |
| S.C. CURR. (ISC)   | 8.9 AMPS         |
| TEMP. COEF. (PMPP) | -0.24 %/C        |
| TEMP. COEF. (Voc)  | -0.24 %/C        |
| MAX SERIES FUSE    | 25 AMPS          |
| UL COMPLIANT (Y/N) | YES              |

### MAX. DC VOLTAGE CALCULATION

|  |       |
|--|-------|
| $V_{OC}MAX = V_{OC} * (1 + (TMIN - TSTC) * (VTC / 100))$ |       |
| $V_{OC}MAX$  | 70.80 |
| MAX STRING VOLTAGE                                       | 424.8 |

### MAX. DC CURRENT CALCULATION

|                            |       |
|----------------------------|-------|
| $I_{SC}MAX = I_{SC} * TCX$ |       |
| $I_{SC}MAX$ (AMPS)         | 11.10 |

### MID-CIRCUIT INTERRUPTER

| MAKE                   | TESLA          |
|------------------------|----------------|
| MODEL                  | MCI-2          |
| ENCL. RATING           | NEMA 4X / IP65 |
| DC INPUT:              |                |
| CONNECTOR TYPE         | MC4            |
| MAX IN-LINE PV MODULES | 3              |
| MAX MCI PER STRING     | 5              |
| MAX. SYSTEM VOLTAGE    | 1000 VOLTS     |
| NOM. CURRENT (Imp)     | 13.00 AMPS     |
| MAX. CURRENT (Isc)     | 17.00 AMPS     |
| RSD COMPLIANT (Y/N)    | YES            |
| UL COMPLIANT (Y/N)     | YES            |

### JUNCTION BOX

| MAKE            | SOLADECK     |
|-----------------|--------------|
| MODEL           | 0799-5B      |
| PROTECT. RATING | NEMA TYPE 3R |
| UL LIST. (Y/N)  | YES          |

### EX. BACKED-UP LOADS PANEL

| MAKE                | I-T-E         |
|---------------------|---------------|
| MODEL               | G4040MB1200CU |
| ENCL. RATING        | NEMA TYPE 1   |
| VOLT. RATING        | 240           |
| BUS RATING          | 200 AMPS      |
| UL LIST. (Y/N)      | YES           |
| MAIN BREAKER (Y/N)  | YES           |
| MAIN BREAKER RATING | 200 AMPS      |

- RE-FEED BACKED-UP LOADS PANEL VIA GATEWAY OUTPUTS
- REMOVE N/G BOND IN BACKED-UP LOADS PANEL ONLY

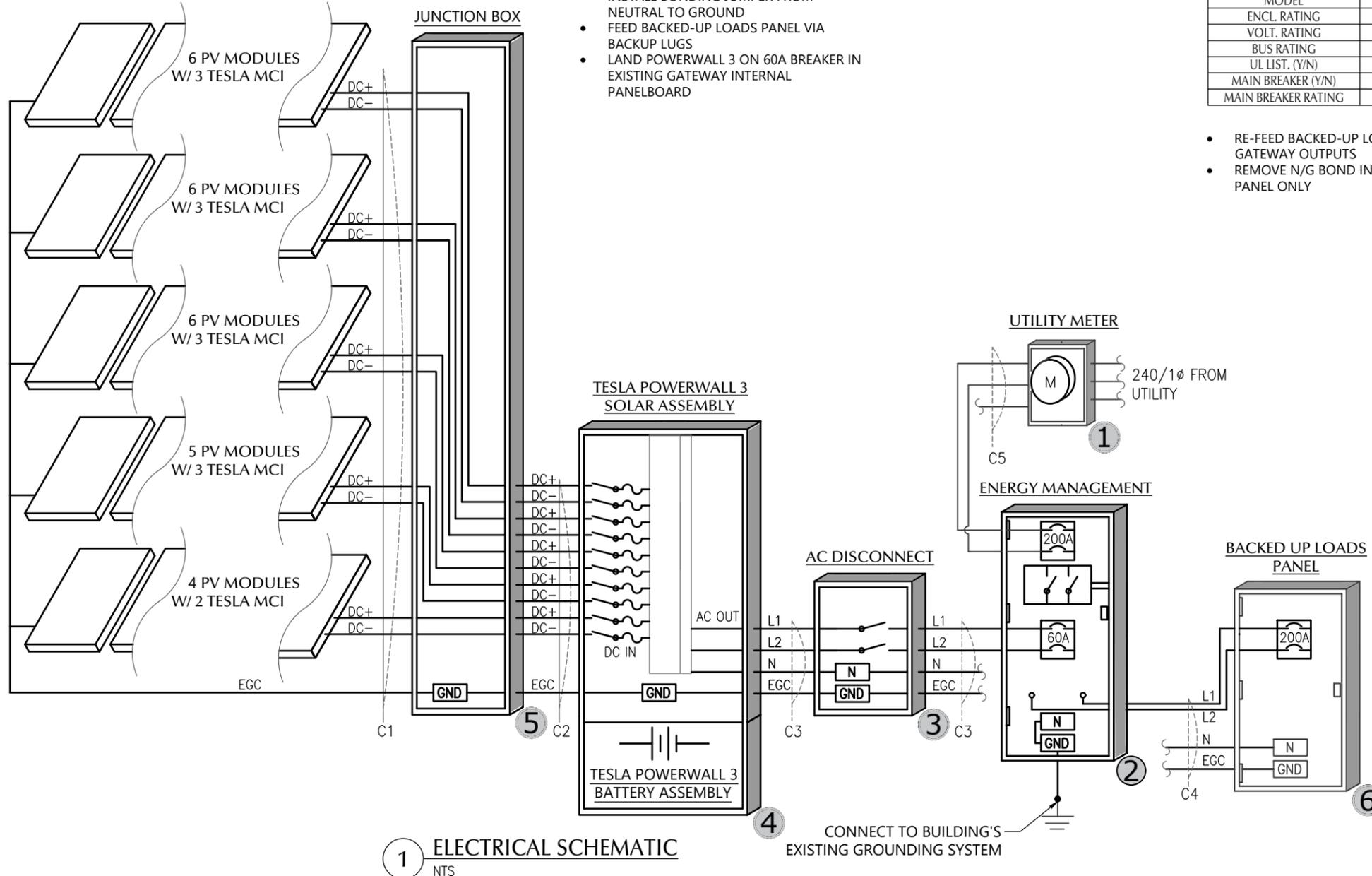
### DC/AC INVERTER & BATTERY

| MAKE                 | TESLA POWERWALL 3 |
|----------------------|-------------------|
| MODEL                | 1707000-XX-Y      |
| INVERTER INFO:       |                   |
| DC INPUT:            |                   |
| MAX POWER            | 20000 WATTS       |
| INPUT VOLT. RANGE    | 60-550 VOLTS      |
| MPPT VOLT. RANGE     | 60-480 VOLTS      |
| MAX. MPPT CUR.       | 13 AMPS           |
| STRING INPUTS        | 6 MPPTs           |
| AC OUTPUT:           |                   |
| MAX. CONT. POWER     | 11500 WATTS       |
| NOM. VOLT.           | 240 VOLTS         |
| MAX. CONT. CURRENT   | 48.00 AMPS        |
| RAPID SHUTDOWN (Y/N) | YES               |
| PROTECT. RATING      | NEMA TYPE 3R      |
| BATTERY INFO:        |                   |
| USABLE ENERGY        | 13.5 kWh          |
| NOM. VOLT.           | 240 VOLTS         |
| MAX. CONT. CHARGE    | 5000 WATTS        |
| UL LIST. (Y/N)       | YES               |

### AC DISCONNECT

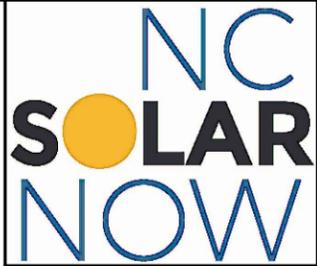
| MAKE           | GENERIC   |
|----------------|-----------|
| MODEL          | NA        |
| ENCL. RATING   | NEMA 3R   |
| VOLT. RATING   | 240 VOLTS |
| AMP RATING     | 60 AMPS   |
| UL LIST. (Y/N) | YES       |
| FUSED (Y/N)    | NO        |
| FUSE RATING    | N/A       |

- LOAD-BREAK RATED
- VISIBLE OPEN
- LOCKABLE IN OPEN POSITION
- INSTALL ADJACENT TO METER
- DISCONNECT TO BE READILY ACCESSIBLE TO UTILITY COMPANY PERSONNEL AT ALL TIMES
- DISCONNECT MARKED AND RATED PER NEC SECTION 690.13 AND 705.10



1 ELECTRICAL SCHEMATIC  
NTS

4 CONNECT TO BUILDING'S EXISTING GROUNDING SYSTEM



### CLIENT INFO

JOSH GURLITZ  
208 SPRING LN  
CHAPEL HILL NC 27514

### PROJECT INFO

DC INPUT: 12.420 kW  
AC OUTPUT: 11.500 kW  
DOI INSPT. METHOD: OPTION 2

### Model Energy

300 Fayetteville St.  
#1430  
Raleigh, NC 27602  
919-274-9905  
ModelEnergy.com

P-1194



### CODE REFERENCES

NATION ELECTRICAL CODE v. 2017  
NC FIRE PROTECTION CODE v. 2018  
NC BUILDING CODE v. 2018  
NC RESIDENTIAL CODE v. 2018  
ACSE v. 7-10

### SITE CONDITIONS

WIND SPEED: 120 MPH  
RISK CATEGORY: II  
EXPOSURE: B  
SNOW: 15 PSF

### SHEET INDEX

PV-1: COVER SHEET  
PV-2: PV STRUCTURAL  
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PV-4: PV EQUIPMENT LABELS  
PV-5: PV INSTALL GUIDE

### VERSIONS

| FOR:         | DESIGNER: | DATE:    |
|--------------|-----------|----------|
| CONSTRUCTION | MCP       | 1/8/2025 |

PV SYSTEM  
ELECTRICAL

# PV-3.1

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**WARNING: PHOTOVOLTAIC POWER SOURCE**

5 **NEC 690.31 (G)(3)&(4)**  
PLACE ON ALL JUNCTION BOXES, EXPOSED RACEWAYS, AND OTHER WIRING METHODS EVERY 10' AND ON EVERY SECTION SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.

**WARNING**  
THIS EQUIPMENT FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE SHALL NOT EXCEED AMPACITY OF BUSBAR.  
2 **NEC 705.12 (B)(2)(3)(c)**

**RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM**

3 **NEC 690.56 (C)(3)**  
PLACE ON RAPID SHUTDOWN SWITCH OR EQUIPMENT WITH INTEGRATED RAPID SHUTDOWN \*REFLECTIVE\*

**PV SYSTEM DISCONNECT**

3 **NEC 690.13 (B)**  
PLACE ON PV SYSTEM DISCONNECTING MEANS.

**WARNING**  
**ELECTRIC SHOCK HAZARD**  
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION  
2 **NEC 690.13 (B)**  
PLACE ON PV SYSTEM DISCONNECTING MEANS.

**GENERATION PANEL:**  
IN THE EVENT OF AN EMERGENCY, TURN OFF ALL BREAKERS TO DISCONNECT BACKUP POWER SOURCE(S).  
2

**WARNING**  
**THREE POWER SOURCES**

1 **SOURCES: UTILITY GRID, BATTERY AND PV SOLAR ELECTRIC SYSTEM**  
2  
6 **NEC 705.12(B)(3)**  
PLACE ON ALL EQUIPMENT THAT IS SUPPLIED BY THREE POWER SOURCES

**SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN**

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN THE ARRAY  
2 **NEC 690.56 (C)(1)(a)**  
PLACE WITHIN 3FT OF SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATIONS OF RAPID SHUTDOWN SWITCHES

**PHOTOVOLTAIC SYSTEM AC DISCONNECT**  
OPERATING VOLTAGE **240** VOLTS  
OPERATING CURRENT **48.0** AMPS  
3 **NEC 690.54**  
PLACE ON INTERCONNECTION DISCONNECTING MEANS

**WARNING:**  
IN THE EVENT OF A UTILITY OUTAGE, THIS PANEL IS FED FROM ENERGY STORAGE SYSTEM.  
2  
6 **NEC 690.54**  
PLACE ON BACKED UP LOAD PANEL(S).

**DIRECT CURRENT PHOTOVOLTAIC POWER SOURCE**  
MAXIMUM VOLTAGE **600** VDC  
MAX CIRCUIT CURRENT **55.5** AMPS  
4 **NEC 690.53**  
PLACE ON ALL DC DISCONNECTING MEANS

SERVICE DISCONNECT LOCATED:  
SOUTH WALL OF RESIDENCE  
BATTERY DISCONNECT LOCATED:  
SOUTH WALL OF RESIDENCE  
PV DISCONNECT LOCATED:  
SOUTH WALL OF RESIDENCE  
2 3 **NEC 705.10**  
PLACE AT SERVICE EQUIPMENT AND PV SYSTEM DISCONNECTING MEANS.

**LABEL NOTES**

1. LABELS SHOWN ARE HALF THEIR ACTUAL REQUIRED SIZE.
2. LABEL MATERIAL SHALL BE SUITABLE FOR THE EQUIPMENT ENVIRONMENT.
3. DC CONDUIT SHALL BE MARKED WITH REQUIRED LABEL EVERY 10 FEET.
4. LABELS WILL BE APPLIED IN ACCORDANCE WITH THE NEC. SOME LABELS MAY NOT BE NECESSARY.

**DC WIRING NOTES**

1. CONDUCTORS SHALL BE COPPER, RATED AT NOT LESS THAN 600 VOLTS FOR RESIDENTIAL CONSTRUCTION AND NOT LESS THAN 1000 VOLTS FOR COMMERCIAL CONSTRUCTION.
2. MINIMUM SIZE SHALL BE #10 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. EXPOSED WIRING CONDUCTOR INSULATION SHALL BE TYPE PV WIRE, USE-2, OR RHW-2 WHERE THE OUTER LAYER OF THE INSULATION IS UV, SUNLIGHT, AND MOISTURE RESISTANT.
6. EXTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THWN-2 AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT) OR RIGID POLYVINYL CHLORIDE CONDUIT(PVC). ALTERNATIVELY, METAL CLAD CABLE(MC) CAN BE USED AS WELL WHEN RATED FOR USE IN WET LOCATIONS.
7. INTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THHN-2 AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT), FLEXIBLE METAL CONDUIT(FMC), OR METAL CLAD CABLE(MC).
6. USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. USE SCHEDULE 80 PVC OUTDOORS WHERE SUBJECT TO PHYSICAL DAMMAGE
7. MINIMUM CONDUIT SIZE TO BE 1/2".
8. WIRING METHODS TO CONFORM TO ARTICLES 330, 334, 348, 350, 352, 356, AND 358 OF THE 2017 NEC.

**AC WIRING NOTES**

1. CONDUCTORS SHALL BE COPPER RATED AT NOT LESS THAN 600 VOLTS.
2. MINIMUM SIZE SHALL BE #14 AWG UNLESS OTHERWISE NOTED ON THE DRAWINGS.
3. EXTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THWN AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT), RIGID POLYVINYL CHLORIDE CONDUIT(PVC), LIQUID-TIGHT FLEXIBLE METAL CONDUIT(LFMC), OR LIQUID-TIGHT FLEXIBLE NON-METALLIC CONDUIT(LFNC) . ALTERNATIVELY, METAL CLAD CABLE(MC) CAN BE USED AS WELL WHEN RATED FOR USE IN WET LOCATIONS.
4. INTERIOR WIRING CONDUCTOR INSULATION SHALL BE TYPE THHN AND INSTALLED IN ELECTRICAL METALLIC TUBING(EMT), FLEXIBLE METAL CONDUIT(FMC), METAL CLAD CABLE(MC), OR ROMEX.
5. USE SCHEDULE 40 PVC OUTDOORS WHERE NOT SUBJECT TO PHYSICAL DAMAGE OR BELOW FLOOR SLAB. USE SCHEDULE 80 PVC OUTDOORS WHERE SUBJECT TO PHYSICAL DAMMAGE
6. MINIMUM CONDUIT SIZE TO BE 1/2".
7. WIRING METHODS TO CONFORM TO ARTICLES 330, 334, 348, 350, 352, 356, AND 358 OF THE 2017 NEC.

**CONSTRUCTION NOTES**

1. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE NEC, STATE, AND LOCAL APPLICABLE CODES.
2. FOLLOW MANUFACTURER'S INSTALLATION INSTRUCTIONS, BEST PRACTICES, AND SPECIFICATIONS.
3. ENSURE REQUIRED MAINTENANCE ACCESS AND CLEARANCES ARE MAINTAINED.
4. WIRES SHALL BE RATED AND LABELED "SUNLIGHT RESISTANT" WHERE EXPOSED TO AMBIENT CONDITIONS.
5. FUSES 0 - 600 AMPS SHALL BE UL CLASS "RK-1" LOW PEAK DUAL ELEMENT TIME DELAY WITH 200,000 AMPERE INTERRUPTING RATING AS MANUFACTURED BY BUSSMANN, UNLESS NOTED OTHERWISE.
6. ALL TERMINALS/LUGS SHALL BE 75° RATED. ALL TERMINALS, SPlicing CONNECTORS, LUGS, ETC SHALL BE IDENTIFIED FOR USE WITH THE MATERIAL (CU/AL) OF THE CONDUCTOR AND SHALL BE PROPERLY INSTALLED.
7. PROVIDE A PULLWIRE IN ALL EMPTY CONDUITS.
8. ALL PENETRATIONS THROUGH EXTERIOR ROOFS SHALL BE FLASHED IN A WATERPROOF MANNER.
9. ALL PENETRATIONS THROUGH ATTIC FIRE BARRIERS SHALL BE SEALED WITH FIRE-BARRIER SEALANT CAULK.
10. SUPPORT ALL CONDUIT AND EQUIPMENT IN ACCORDANCE W/ NEC. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE.
11. METAL CONDUIT COUPLINGS CAN BE COMPRESSION TYPE, THREADED, OR BE SET-SCREW TYPE. PLASTIC CONDUIT COUPLINGS TO BE SOCKET GLUED TYPE.
12. A COMPLETE GROUNDING SYSTEM SHALL BE PRESENT OR PROVIDED AND INSTALLED IN ACCORDANCE WITH ARTICLE 250 OF THE NEC, AND AS SHOWN ON THE DRAWINGS.
13. EACH ELECTRICAL APPLIANCE SHALL BE PROVIDED WITH A NAMEPLATE GIVING THE IDENTIFYING NAME AND THE RATING IN VOLTS AND AMPERES, OR VOLTS AND WATTS. IF THE APPLIANCE IS TO BE USED ON A SPECIFIC FREQUENCY OR FREQUENCIES, IT SHALL BE SO MARKED. WHERE MOTOR OVERLOAD PROTECTION EXTERNAL TO THE APPLIANCES IS REQUIRED, THE APPLIANCE SHALL BE SO MARKED.
14. WHERE APPLICABLE, GROUNDING ELECTRODE CONDUCTOR TO BE CONTINUOUS. GROUNDING CRIMPS TO BE IRREVERSIBLE.
15. PHOTOVOLTAIC SYSTEMS SHALL BE PERMANENTLY MARKED AT VARIOUS EQUIPMENT LOCATIONS TO IDENTIFY THAT A PHOTOVOLTAIC SYSTEM IS INSTALLED AND THAT VARIOUS DANGERS ARE PRESENT.
16. EACH PHOTOVOLTAIC SYSTEM DISCONNECTING MEANS SHALL BE PERMANENTLY MARKED TO IDENTIFY IT AS A PHOTOVOLTAIC SYSTEM DISCONNECT.
17. WHERE ALL TERMINALS OF A DISCONNECTING MEANS MAY BE ENERGIZED IN THE OPEN POSITION, A WARNING SIGN SHALL BE MOUNTED ON OR ADJACENT TO THE DISCONNECT.
18. A PERMANENT LABEL FOR THE DIRECT-CURRENT PHOTOVOLTAIC POWER SOURCE SHALL BE PROVIDED AT THE DC DISCONNECT MEANS.
19. A PERMANENT PLAQUE OR DIRECTORY, DENOTING ALL ELECTRIC POWER SOURCES SERVING THE PREMISES, SHALL BE INSTALLED AT EACH SERVICE EQUIPMENT LOCATION AND AT LOCATIONS OF ALL POWER PRODUCTION SOURCES.
20. ALL MODULE GROUND CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH NEC SECTION 690.4 (C).
21. A NORTH CAROLINA REGISTERED DESIGN PROFESSIONAL WILL BE REQUIRED TO SEAL THE STRUCTURAL DESIGN AT THE TIME OF PERMIT APPLICATION IF ANY OF THE FOLLOWING EXIST AND ARE ATTESTED TO BY THE APPLICANT:
  - I. THE WEIGHT OF THE PV SYSTEM EXCEEDS THREE (3) POUNDS PER SQUARE FOOT(PSF)
  - II. THE ROOF POSSESSES MORE THAN ONE (1) LAYER OF ASPHALT SHINGLES
  - III. THE ROOFING MATERIAL CONSISTS OF A TYPE OTHER THAN ASPHALT SHINGLES OR METAL
  - IV. THE ROOF IS LOCATED IN A 140 MPH OR GREATER WIND ZONE



**CLIENT INFO**  
JOSH GURLITZ  
208 SPRING LN  
CHAPEL HILL NC 27514

**PROJECT INFO**  
DC INPUT: 12.420 kW  
AC OUTPUT: 11.500 kW  
DOI INSP. METHOD: OPTION 2

**Model Energy**  
300 Fayetteville St.  
#1430  
Raleigh, NC 27602  
919-274-9905  
ModelEnergy.com  
P-1194



**CODE REFERENCES**  
NATION ELECTRICAL CODE v. 2017  
NC FIRE PROTECTION CODE v. 2018  
NC BUILDING CODE v. 2018  
NC RESIDENTIAL CODE v. 2018  
ACSE v. 7-10

**SITE CONDITIONS**  
WIND SPEED: 120 MPH  
RISK CATEGORY: II  
EXPOSURE: B  
SNOW: 15 PSF

**SHEET INDEX**  
PV-1: COVER SHEET  
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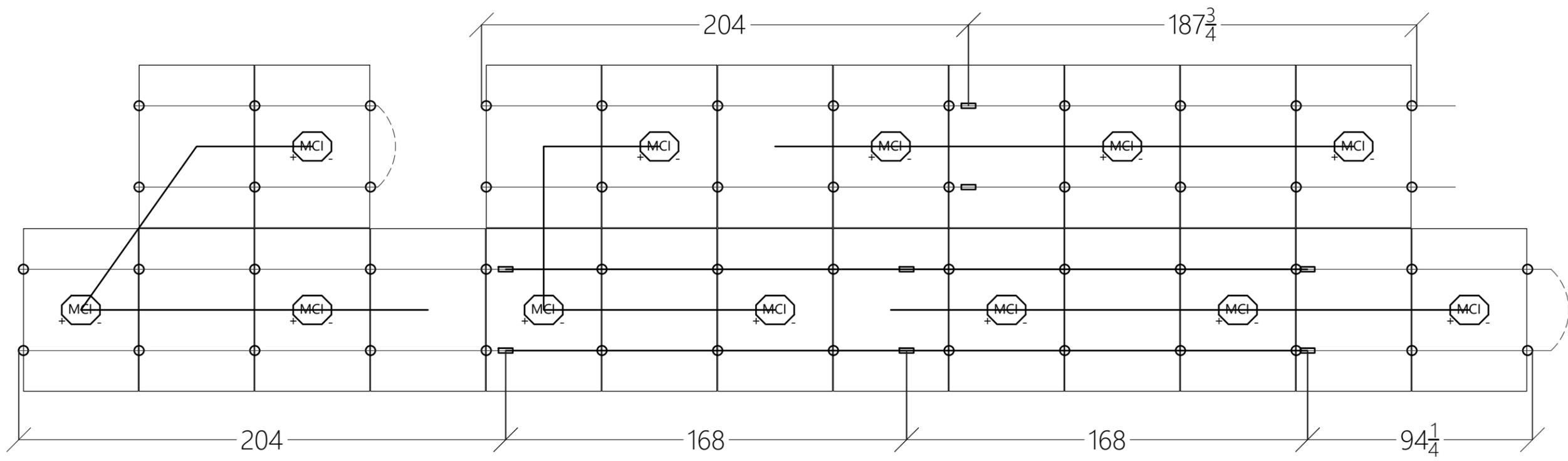
**VERSIONS**

| FOR:         | DESIGNER | DATE     |
|--------------|----------|----------|
| CONSTRUCTION | MCP      | 1/8/2025 |

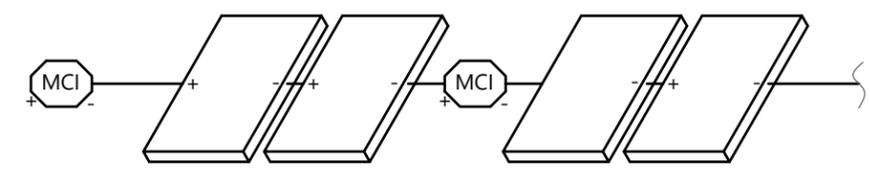
**PV SYSTEM EQUIPMENT LABELS**

**PV-4.1**

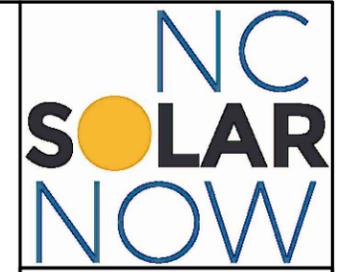
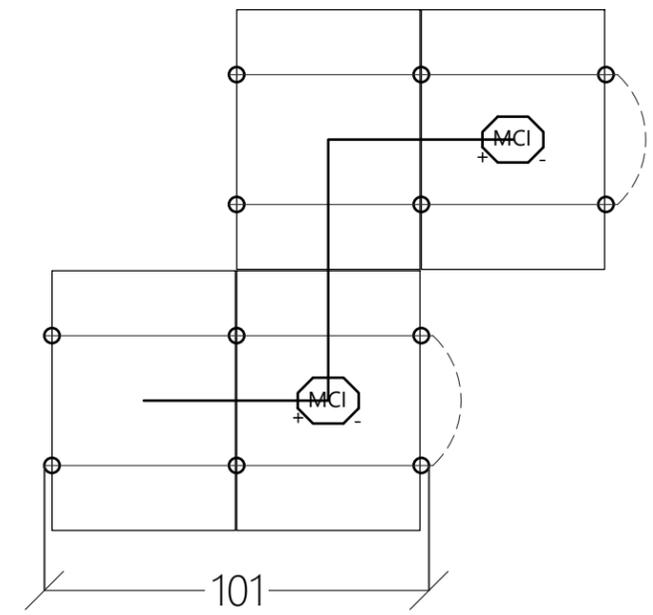
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1 ARRAY LAYOUT DETAIL  
NOT TO SCALE



2 STRING WIRING + MCI DETAIL  
NOT TO SCALE



**CLIENT INFO**  
 JOSH GURLITZ  
 208 SPRING LN  
 CHAPEL HILL NC 27514

**PROJECT INFO**  
 DC INPUT: 12.420 kW  
 AC OUTPUT: 11.500 kW  
 DOI INSPT. METHOD: OPTION 2

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 NC BUILDING CODE v. 2018  
 NC RESIDENTIAL CODE v. 2018  
 ACSE v. 7-10

**SITE CONDITIONS**  
 WIND SPEED: 120 MPH  
 RISK CATEGORY: II  
 EXPOSURE: B  
 SNOW: 15 PSF

**SHEET INDEX**  
 PV-1: COVER SHEET  
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 PV-5: PV INSTALL GUIDE

**VERSIONS**

| FOR:         | DESIGNER | DATE     |
|--------------|----------|----------|
| CONSTRUCTION | MCP      | 1/8/2025 |

**PV SYSTEM INSTALL GUIDE**

**PV-5.1**

Expiration Date

2025

License No.

69583

# North Carolina

## Licensing Board for General Contractors

This is to Certify That:

NC Solar Now Inc.

Raleigh, NC

is duly registered and entitled to practice

## General Contracting

Limitation: Limited

Classification: Building

until

December 31, 2025

when this Certificate expires.

Witness our hands and seal of the Board.

Dated, Raleigh, N.C.

01/01/2025

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Chairman

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# Gurlitz COA for HDC

Final Audit Report

2025-01-15

|                 |  |
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| Created:        | 2025-01-14                                   |
| By:             | John Flanagan (j.flanagan@ncsolarnow.com)    |
| Status:         | Signed                                       |
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