HELIOSCOPE & DESIGN ASSISTANT™
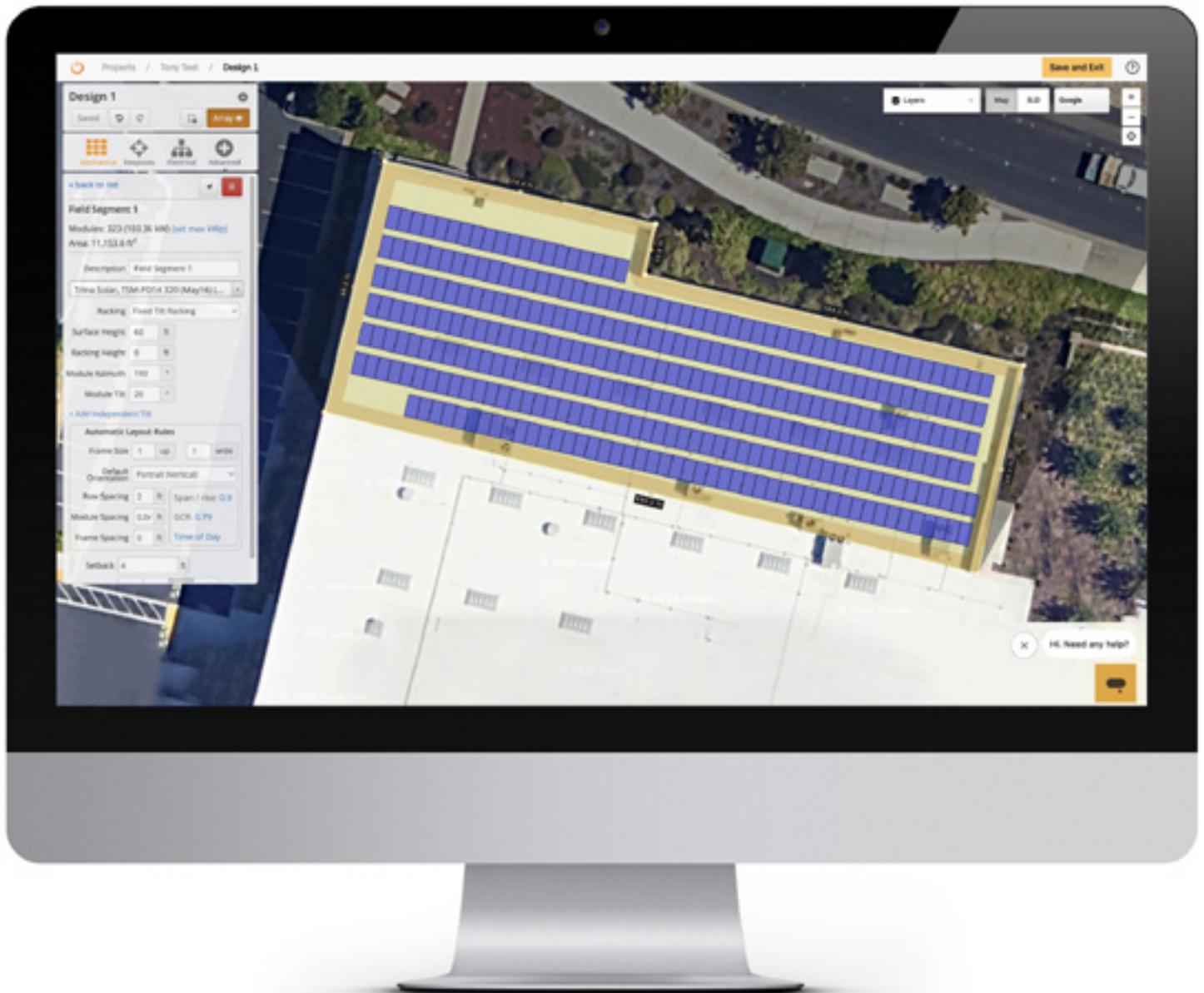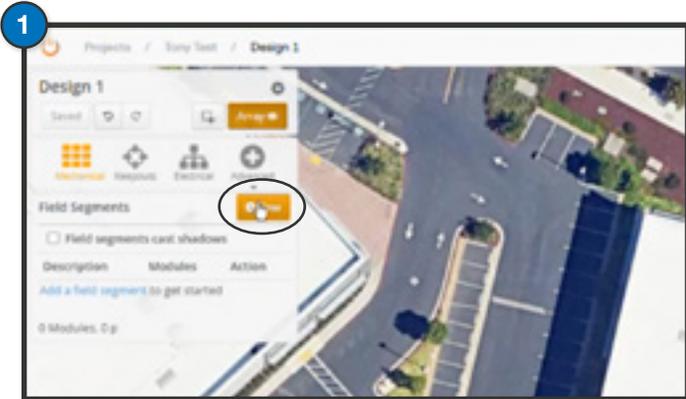
IRONRIDGE

TILT MOUNT PROJECTS

HELIOSCOPE // TILT MOUNT PROJECTS

1. NEW FIELD SEGMENT

Once you have started a new design for a project on the Helioscope platform and pulled up the roof based on the address, add a new field segment to get started.

2. ARRAY PERIMETER TRACING

When you click to add a new field segment, you will then trace the perimeter of where you want the solar array on the roof.
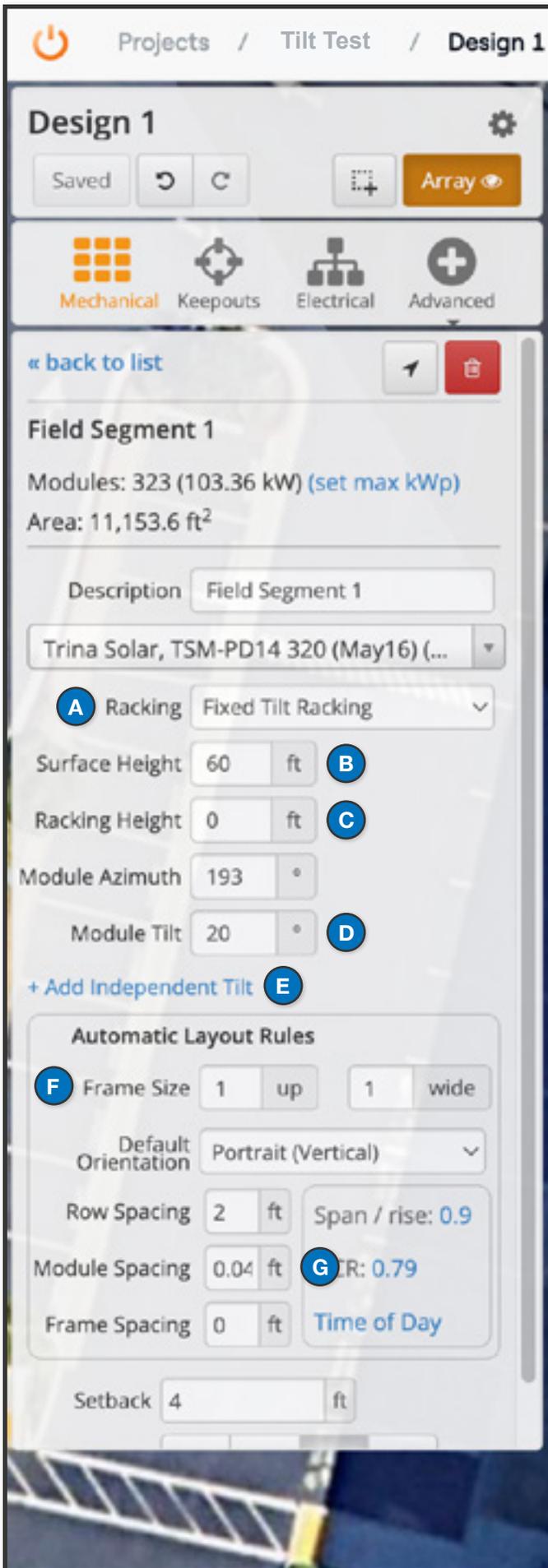

3. AUTO-POPULATED PANELS

Panels for the array will then be auto-populated to fit the space, as defined by the perimeter you selected.

4. FIELD SEGMENT DETAILS

You can then adjust the module azimuth and add various other details into the sidebar on the left. See the next page for more information on this step.

PROPER PARAMETERS

If you are intending to import your Helioscope project into Design Assistant for a Bill of Materials, make sure these parameters are entered correctly.

(A) RACKING

Select "Fixed Tilt Racking" for the flat roof project.

💡 **If the Helioscope project is using "Flush Mount Racking," then the module tilt would need to be 0 degrees.**

(B) SURFACE HEIGHT

This is esentially the roof height and should be 60 feet or less. Input that measurement here.

(C) RACKING HEIGHT

This is already defaulted to zero. Leave it at zero.

(D) MODULE TILT

Enter the tilt angle of the panels. For landscape field segments, the module tile should be 0 degrees or 6-30 degrees. For portrait field segments, the module tilt should be 0 degrees or 4-30 degrees.

(E) SURFACE TILT

Click "Add Independent Tilt" and enter a Surface Tilt of 7 degrees or less. This is the roof slope.

(F) FRAME SIZE

Put this as 1 up for the layout rules.

💡 **If you are putting modules on the roof manually, then the gaps between 2 seperate arrays need to be at least 2 inches. Rail segments require at least 2" horizontal clearance.**
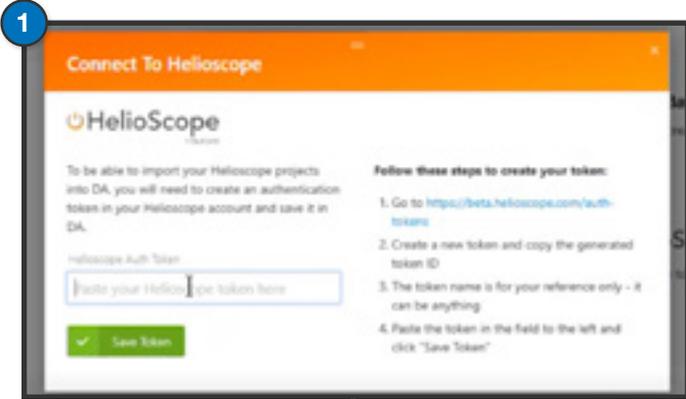
(G) MODULE SPACING

This is the gap between the modules, which is different for each racking system based on mid clamp design.

- For Aire Racking: 0.04167 ft

- For XR Racking: 0.03125 ft

💡 **The spacing is very important and must be entered correctly for Design Assistant to properly assign the correct racking system.**
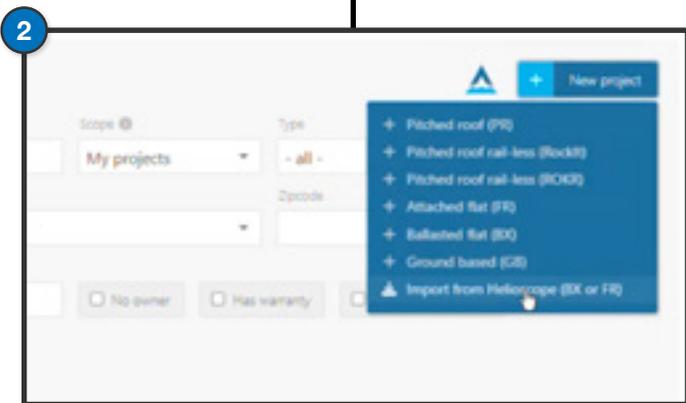
DESIGN ASSISTANT // CONNECTING & IMPORTING

1. CONNECT TO HELIOSCOPE

After signing into (or creating) your Design Assistant account, go to "Mange Account" by clicking on your profile in the right-hand corner.
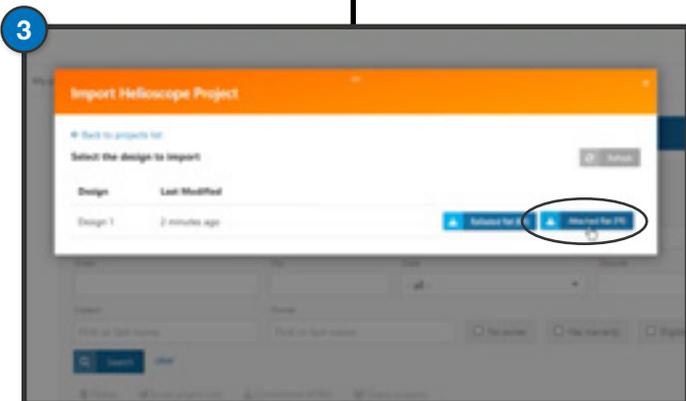
You should then see a "Partner Permissions" section in the lower-right side of the page. There you can click the "Helioscope Connect" button and enter your token (follow the on-screen directions for creating your token).

2. NEW PROJECT

After connecting your Helioscope account, go to the Projects page and click the "New Project" button. You should now see an option to "Import from Helioscope" in the drop-down list. Click that.

 ♀ **Make sure that you "Save and Exit" your Helioscope project before trying to import the design into Design Assistant.**

3. IMPORT FROM HELIOSCOPE

A pop-up with a list of all your Helioscope projects will now appear. Select the project and its corresponding design to import into Design Assistant.

 ♀ **In certain cases, the combination of panel size and tilt angle may not be a valid combination. Our Design Assistant has a validation check to make sure the panels do not interfere with the roof plane. You may need to make updates to either design if you recieve an error message regarding that.**

4. FINAL TOUCHES & BOM

The array(s) from your Helioscope design will import into Design Assistant. Some details need to be entered to finalize the design, such as your roof attachment specs.

 ♀ **The Bill of Materials in Design Assistant should now be updated with everything for the project. You will also see Helioscope details added in the notes section and a Heliscope icon next to your project on the Projects page.**
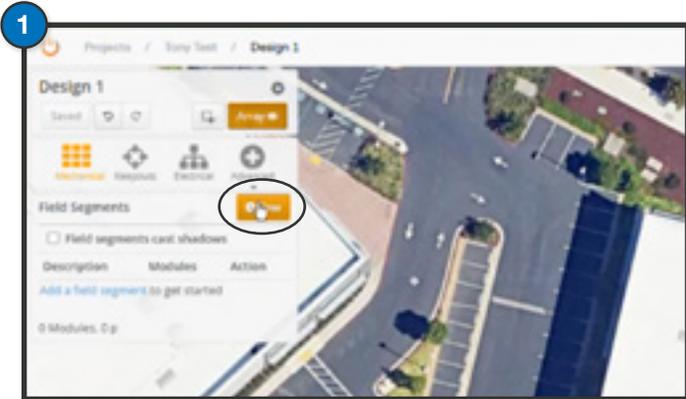
 ♀ **The N/S dimensions of the building need to be entered as well as the rail length before the design can be imported.**
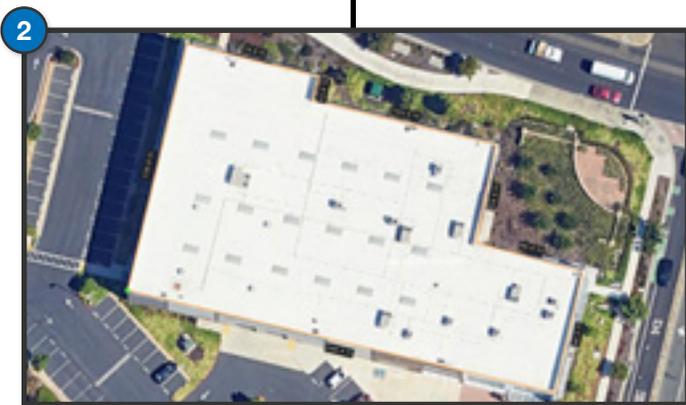
BX BALLASTED PROJECTS

HELIOSCOPE // BX PROJECTS

1. NEW FIELD SEGMENT

Once you have started a new design for a project on the Helioscope platform and pulled up the roof based on the address, add a new field segment to get started.
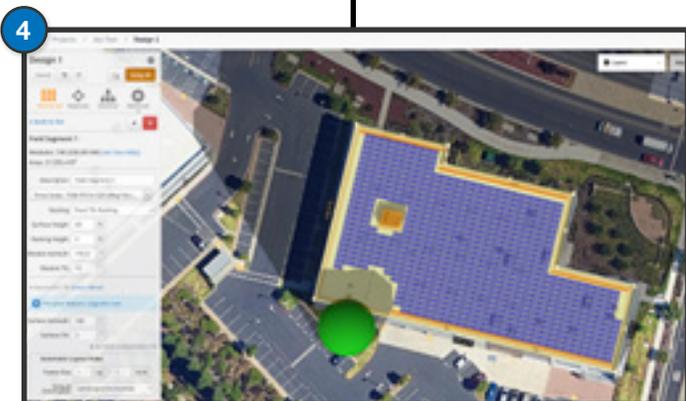

2. TRACE ENTIRE ROOF PERIMETER

When you click to add a new field segment, you will then trace the entire roof perimeter.
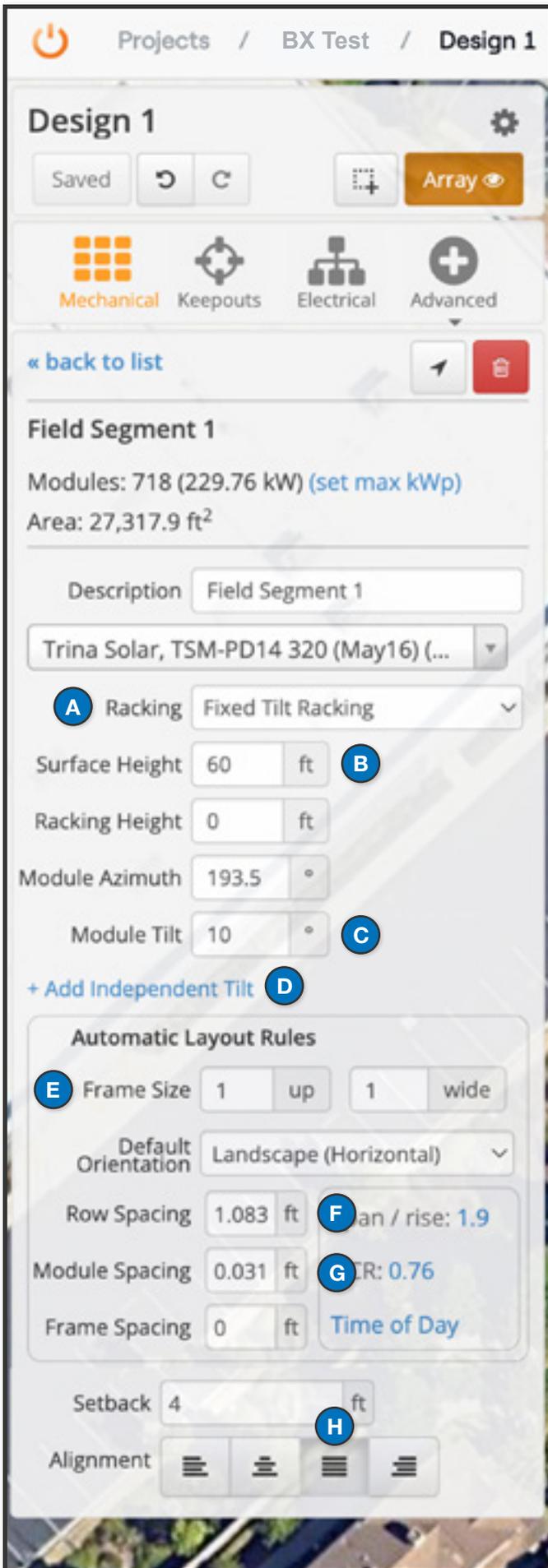

3. AUTO-POPULATED PANELS

Panels for the array will then be auto-populated to fit the space, as defined by the perimeter you selected.

4. FIELD SEGMENT DETAILS

You can then adjust the module azimuth and add various other details into the sidebar on the left. See the next page for more information on this step.

PROPER PARAMETERS

If you are intending to import your Helioscope project into Design Assistant for a Bill of Materials, make sure these parameters are entered correctly.

(A) RACKING

Select "Fixed Tilt Racking" for the BX project.

💡 **BX is landscape orientation only. Flush mount is not supported.**

(B) SURFACE HEIGHT

This is esentially the roof height and should be 10-160 feet. Input a measurement within that range.

(C) MODULE TILT

Enter 5 or 10 degrees, which is dependent on the BX Chassis being used for the project.

(D) SURFACE TILT & SURFACE AZIMUTH

Click "Add Independent Tilt" and enter a Surface Tilt of 7 degrees or less. That is the roof slope. Surface Azimuth should be 180 degrees.

(E) FRAME SIZE & SPACING

Put Frame Size as 1 up and Frame Spacing as 0 ft for the layout rules.

(F) ROW SPACING

The row spacing depends on the module tilt:

- For 5 degrees: 0.8333 ft
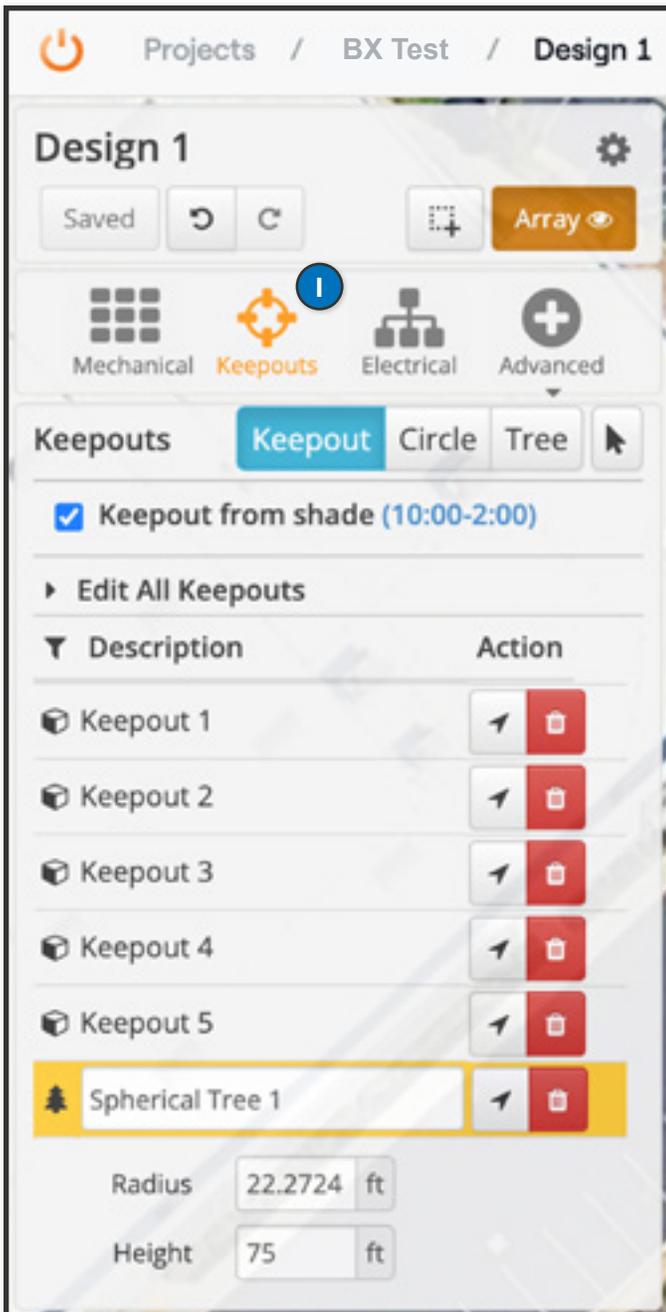
- For 10 degrees: 1.0833 ft

💡 **The spacing is very important and must be entered correctly for Design Assistant to properly assign the correct racking system.**

(G) MODULE SPACING

Module spacing should be entered as 0.03125 ft.

(H) ALIGNMENT

For alignment, select the "block" format (shown).

PROPER PARAMETERS (CONTINUED)

If you are intending to import your Helioscope project into Design Assistant for a Bill of Materials, make sure these parameters are entered correctly.

I **KEEPOUTS**

Select the "Keepout" section to add keepout details.

- **All keepout setback values for a given design must be equal.**

- **Keepouts with height and setback equal to zero are exempt from this rule, with the expectation that they are only used to indicate chassis clearance zones.**

- **If trees are present and cause shading on field segments, BX DA will attempt to detect and remove modules which are affected by shading.**
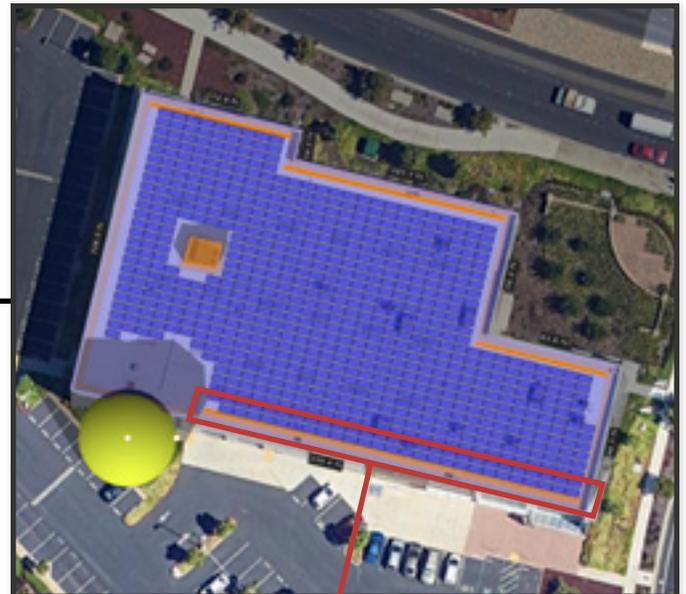
IMPORTANT: SPACE FOR BX CHASSIS EXTENSIONS

For the furthest north and south row of modules, please make sure there is at least these distances of clearance so the BX Chassis do not intrude in the setback. The distance listed below is from the edge of the setback to the edge of the module. Draw keepouts (0 height and 0 setback) that are that distance for all of the north and south sides (or any instances where the long side of modules face the roof edges). Helioscope does not recognize BX Chassis clearance, so this will set it up properly for import.
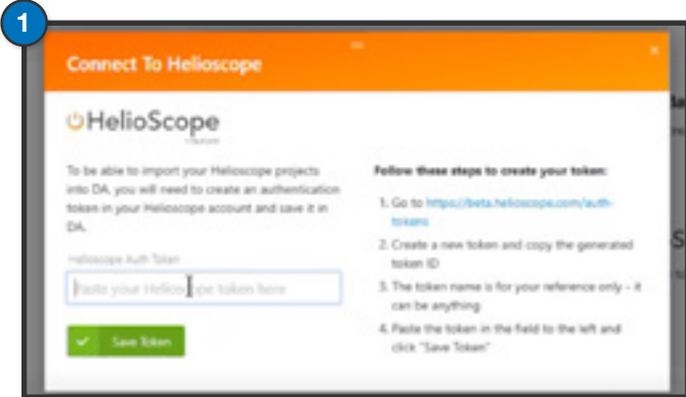
For 5° Chassis:

- **North: 18.94 inches (1.58 ft)**
- **South: 15.35 inches (1.28 ft)**

For 10° Chassis:

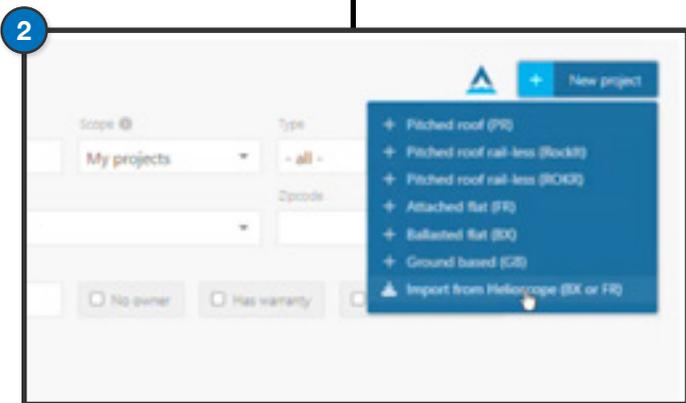- **North: 16.91 inches (1.41 ft)**
- **South: 20.27 inches (1.69 ft)**

DESIGN ASSISTANT // CONNECTING & IMPORTING

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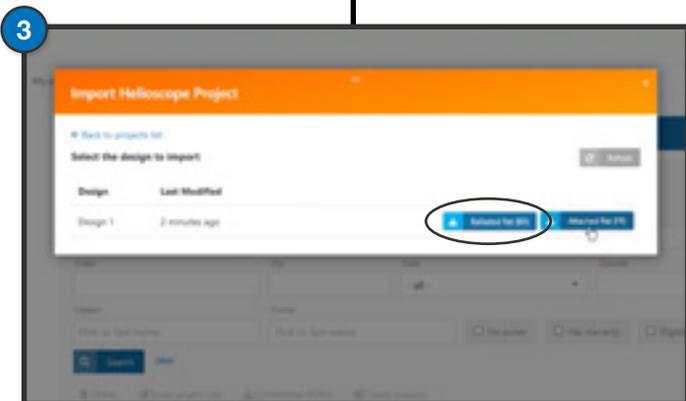
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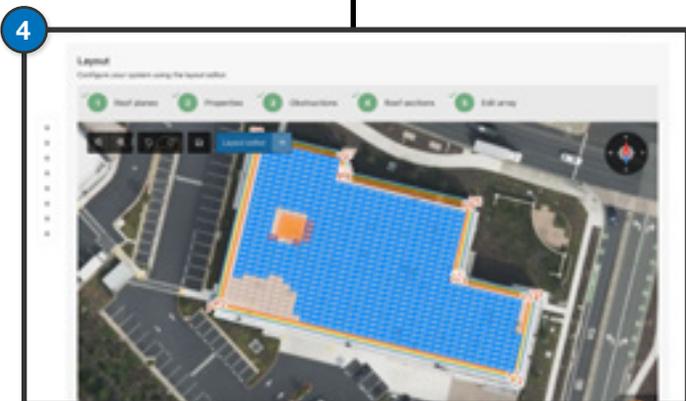
2. NEW PROJECT

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💡 **Make sure that you "Save and Exit" your Helioscope project before trying to import the design into Design Assistant.**

3. IMPORT FROM HELIOSCOPE

A pop-up with a list of all your Helioscope projects will now appear. Select the project and its corresponding design to import into Design Assistant.

4. FINAL TOUCHES & BOM

The array(s) from your Helioscope design will import into Design Assistant. Some details need to be entered to finalize the design, such roof attachment specs. You will also want to confirm visual details (see next page).

💡 **The Bill of Materials in Design Assistant should now be updated with everything for the project. You will also see Helioscope details added in the notes section and a Helioscope icon next to your project on the Projects page.**

DESIGN ASSISTANT // CONNECTING & IMPORTING
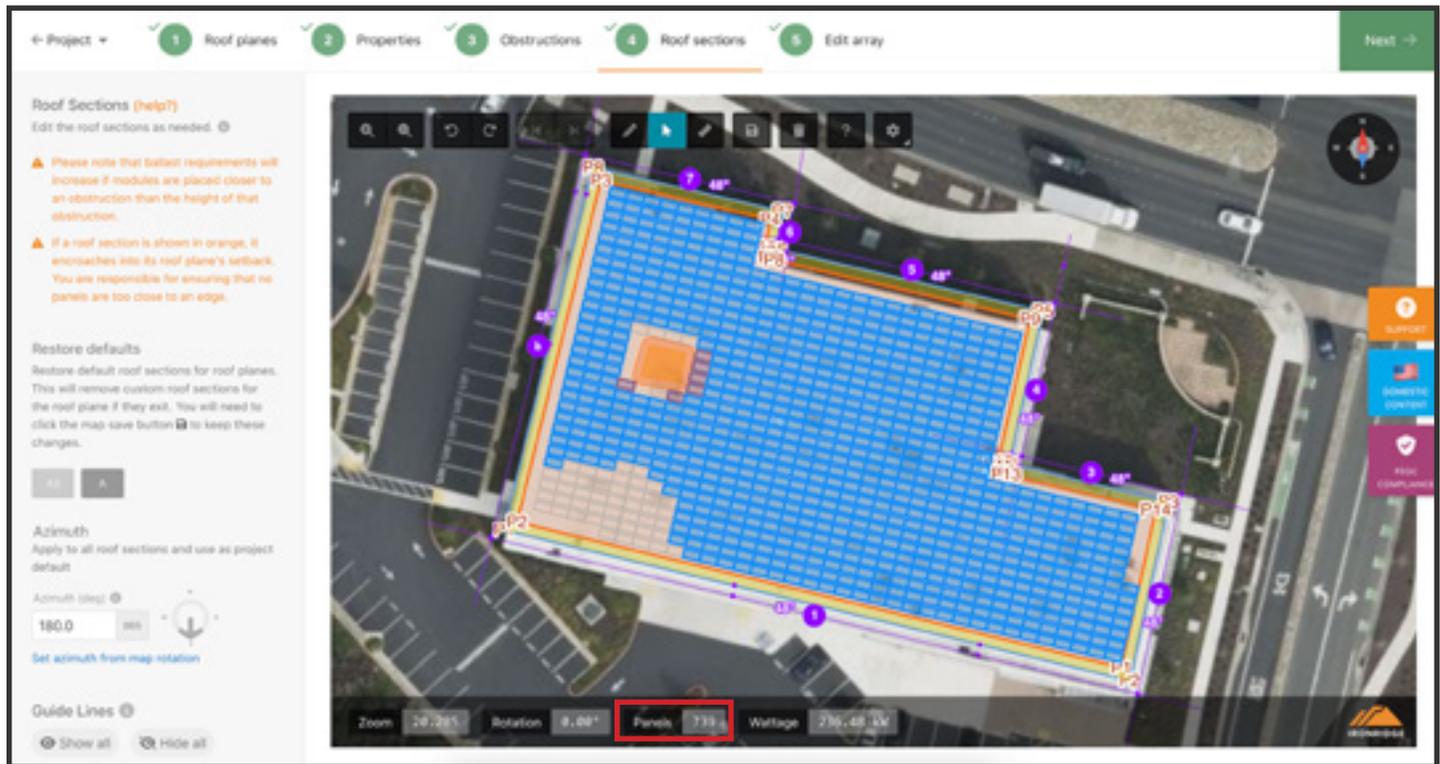
VISUAL LAYOUT EDITOR

After the project is imported into Design Assistant, you can configure your system using the layout editor.

There are a few items to make sure you review and keep in mind at this point:

- The import feature will attempt to replicate the project as accurately as possible; however, minor differences may occur. Users are encouraged to verify the project imported into DA matches the original design created in Helioscope.

- Roof sections can overlap the setback after import due to engineering calculations performed by Design Assistant. Make sure modules aren't encroaching into the setback.

- The array may not perfectly line up with the satellite imagery of the roof in Design Assistant after import. This is okay and may happen due to different mapping sources being used, as Design Assistant is using Bing Maps. Everything has already been designed and confirmed in Helioscope prior to import.

- Take note of any obstructions, such as trees, on import. Modules will be removed, but you won't see the tree anymore.

- Confirm module counts (highlighted in red above) and cross reference the array maps. Make sure the panel count in Design Assistant matches what Helioscope counted. You may need to add or remove a few modules in Design Assistant if you notice a discrepancy. We try our best to on import, but please confirm the array matches as expected.

- If a roof section is shown in orange, it encroaches into its roof plane's setback. You are responsible for ensuring that no panels are too close to an edge.

IronRidge.com/design