

AEC / Autodesk / Matterport > Recap > Revit

Autodesk provides a direct path to import Matterport 3D point cloud data into programs like Revit, using their associated reality capture program, Recap. This Recap-imported point cloud file can be saved as an .rcs file and directly exports to Revit. These steps are detailed below.

Link to 3D walk-through of space discussed in example:

<https://my.matterport.com/show/?m=FFcfigr5otX>

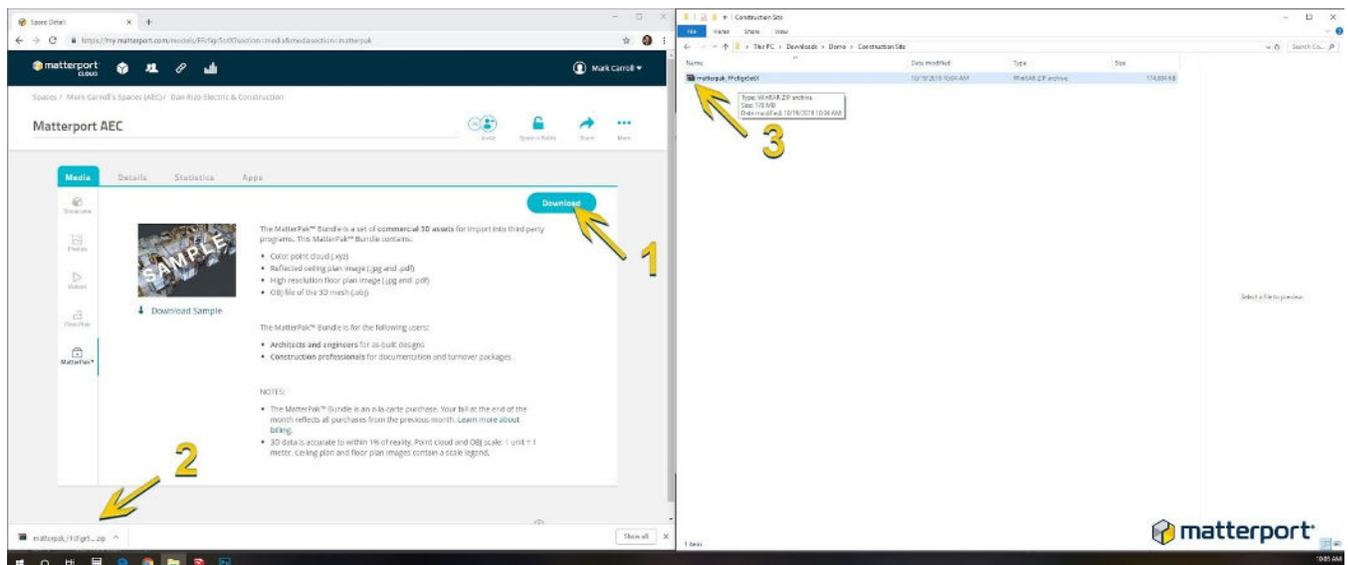
- Space was scanned with a Matterport Pro2 camera, a Manfrotto 290xtra tripod, at one height level throughout , collected by the iPad Matterport Capture app on an iPad Pro. (iOS 12.0.1 - 64GB)
- [Link to Matterport's MatterPak and 2D Floor Plan Schematic files](#) for this space.

Space Details

- Number of Scans in Space: 27
- Time Required to Scan Space: 35 minutes
- Time Required to Add MatterTags and Labels: less than 8 minutes

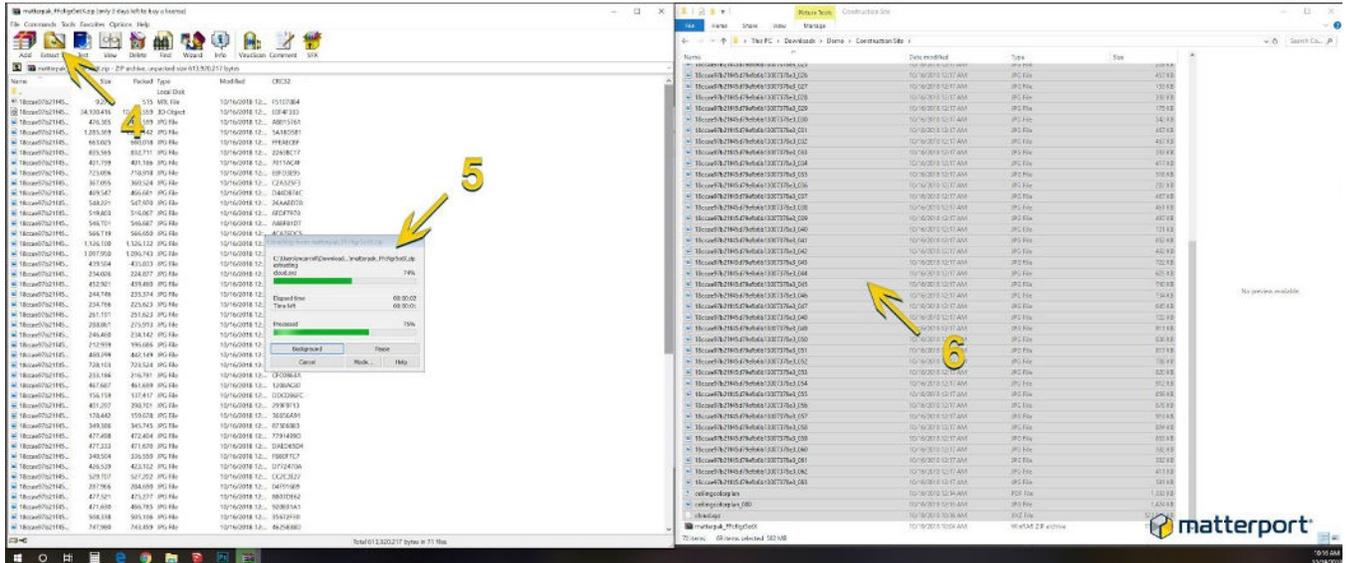
Saving Matterport 3D Files to Computer

- Depending on your bundle or your account level, click the purchase button on the My.Matterport MatterPak page. (step 1)
- Save MatterPak .zip file locally on your computer. (step 2)
- Open MatterPak .zip file that was saved on your computer. (step 3)



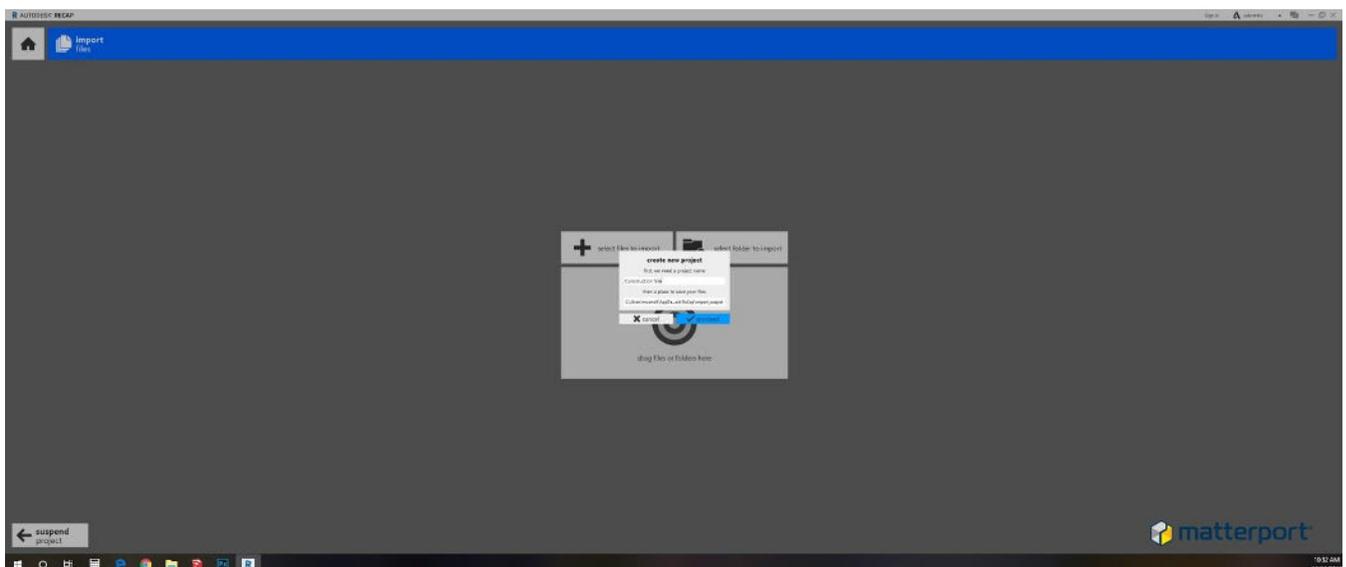
- 'Extract To' or "unzip" contents of MatterPak .zip file to local folder on your computer. (step 4)
- Process extraction of contents of MatterPak .zip file. (step 5)

- Confirm successful extraction of contents of MatterPak .zip file into local folder. (step 6)



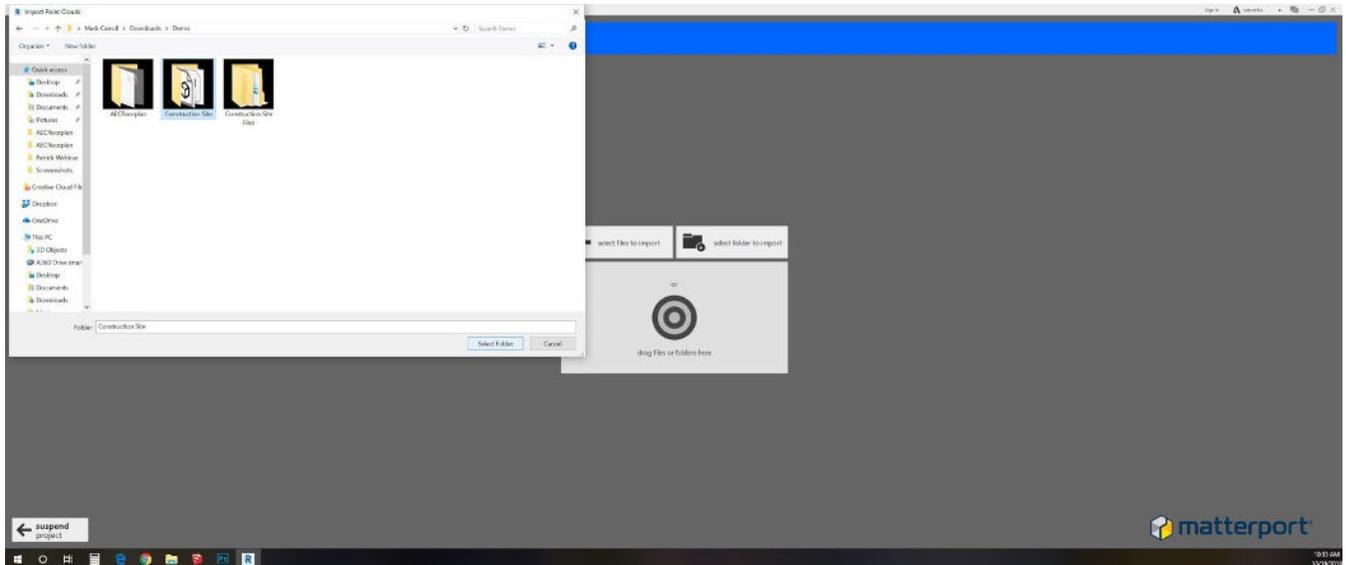
Recap

- Open Autodesk Recap
- Start a new project, large button click on the top left side of the Recap screen.
- Box appears in center of screen with three options for a new project, click the left button marked Import point cloud.
- Box appears in center of screen, create new project name to be assigned, as well as the location of the file to be saved. When finished, click the proceed button.

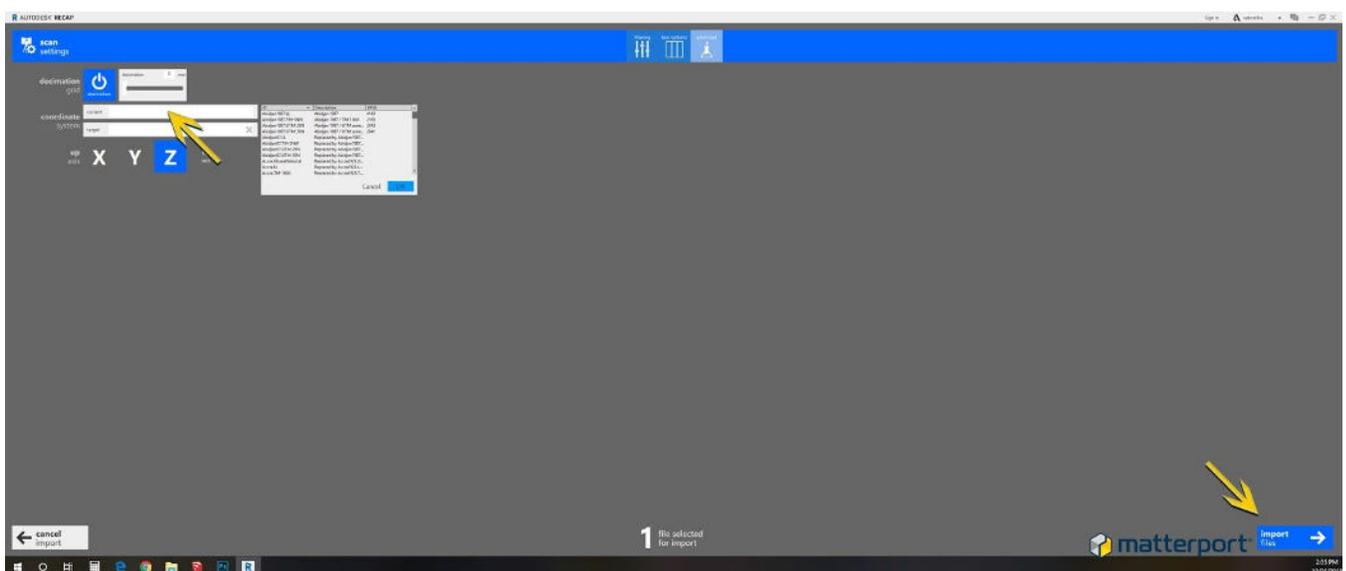


- Option on screen ask if you want to select a file to import, if you would like to select a folder to import or you can drag files from your computer to this screen to be imported.
- Selection window appears on your screen, prompting you to locate the folder that contains the MatterPak .zip file contents, which is the Matterport 3D point cloud data set.

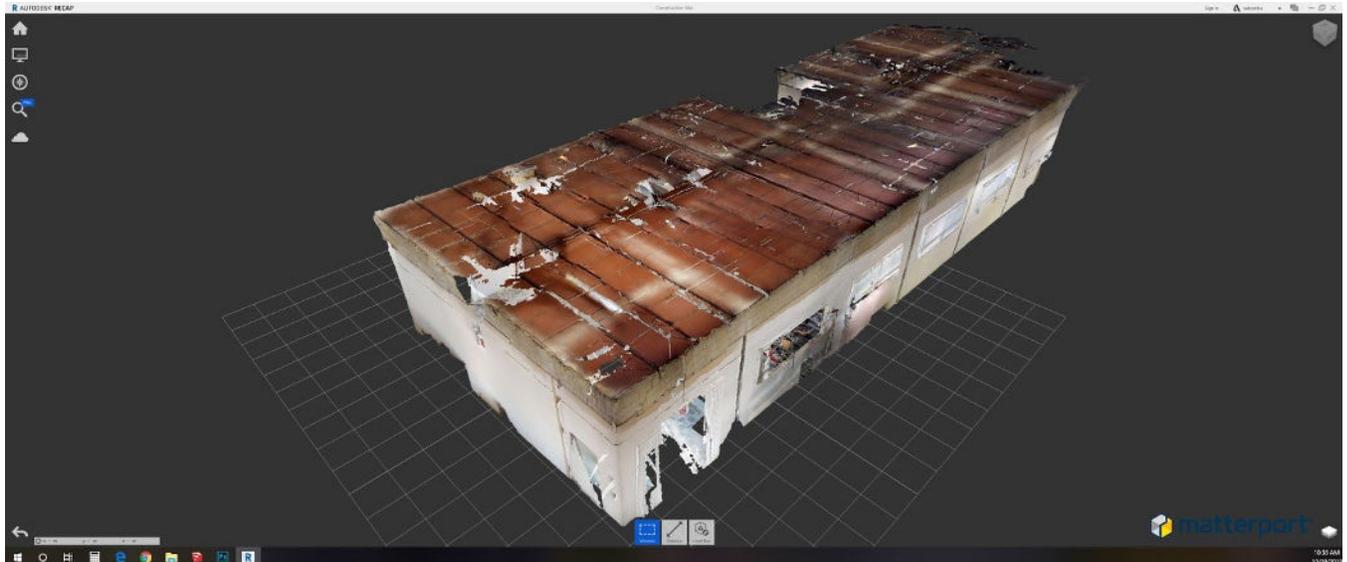
- **Note** The folder you are selecting should have the contents of the .zip file you extracted, also referred to as unzipped. This process was covered above. Recap will not open the files through the .zip file, Recap will only open the extracted and locally saved contents of the MatterPak .zip file.

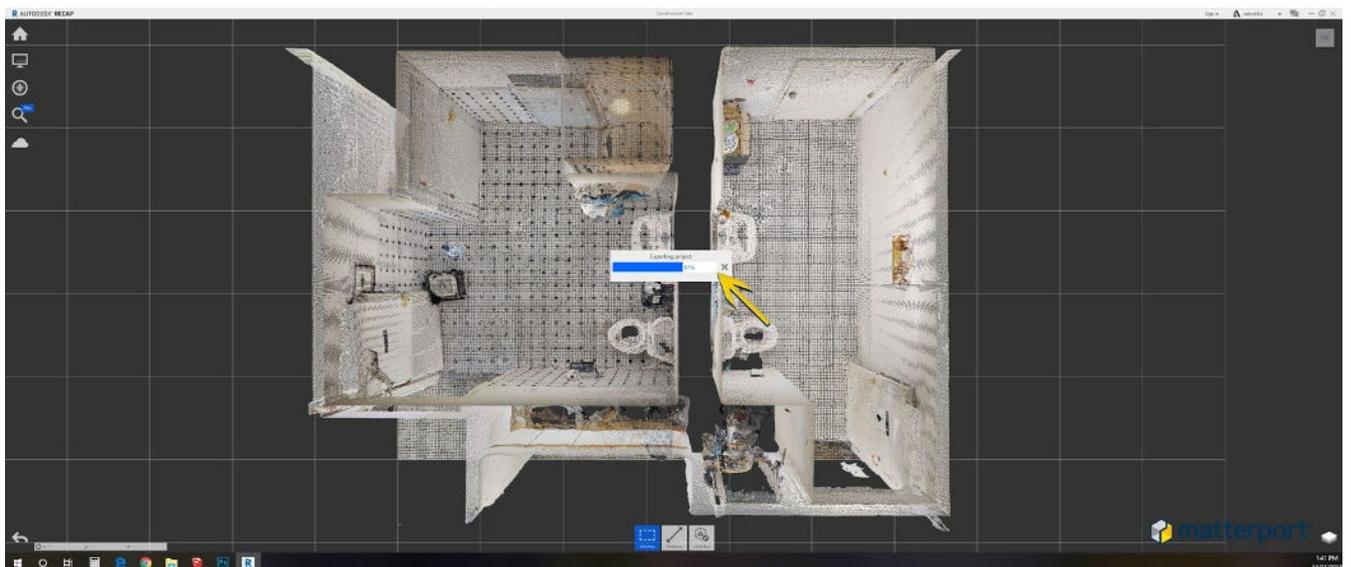
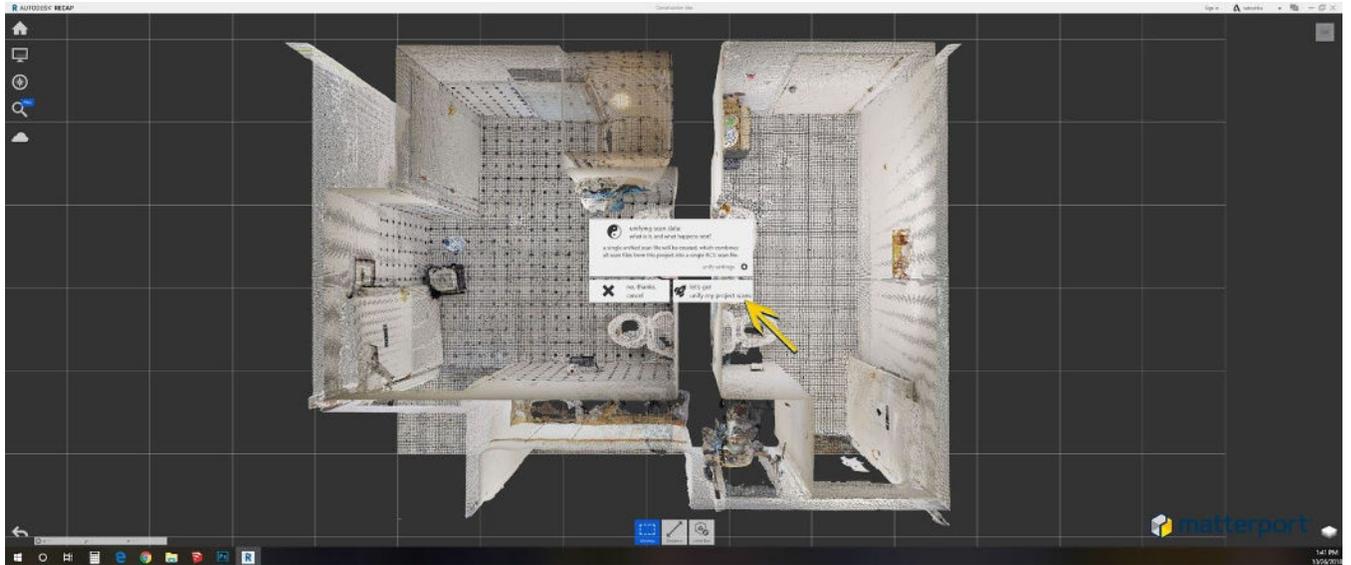


- Folder has been selected and a screen appears that gives you options for the scan settings, including filtering, text options, and advanced options like x, y & z adjustment, coordinates, targets, as well as point decimation options.
- We recommend you leave the import point cloud settings in their default positions, updating them as needed based on your user experience.
- Advance to the next screen by clicking the import files button on the bottom right side of the screen.



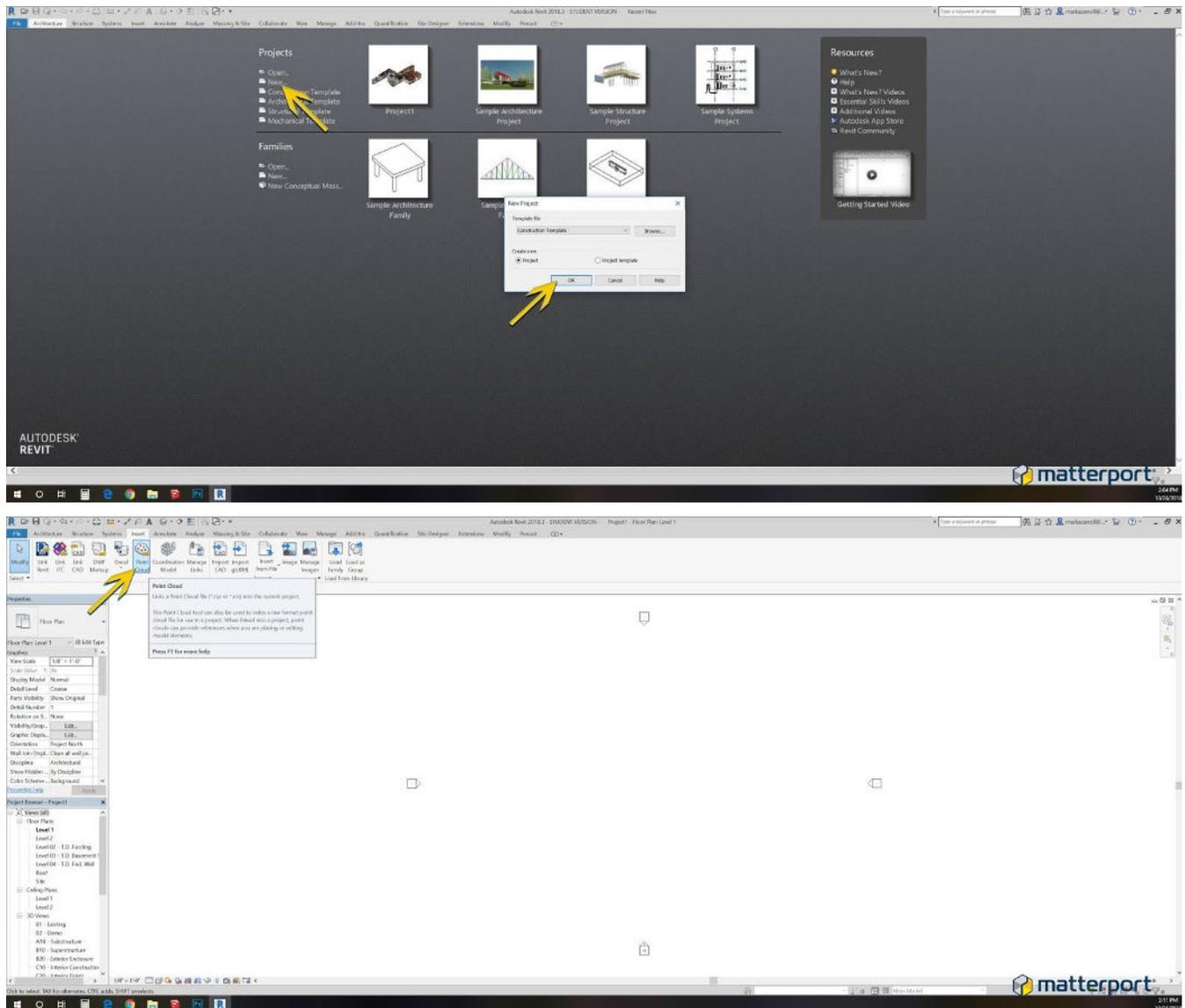
- The files in the folder have been imported into Recap. It's now time to index the files in Recap.
 - Click the cloud file you imported on the top left side of the screen.
 - You may have more than one file displayed that able to be indexed.
 - Select the needed imported files for indexing.
- Click the index scans button on the bottom right side of the screen.
- Recap is now indexing the selected imported files.
 - This process may take some time. Allow Recap time to complete its indexing work without interruption.
 - Do not close Recap down until this process is completed.
 - Once the indexing has been completed, the launch project button on the bottom right side of the screen will change from grey to blue. Click that button.
- Your Matterport 3D Point Cloud data set has been imported into Autodesk Recap. From this screen you are able to:
 - Explore the model using the navigation tools.
 - Limit range of file with limiting tool.
 - Measure distances using the various measuring tools.
 - Edit the model, add additional point clouds, etc.
 - Export as a .rcs file. All MatterPak-sourced image, .obj, and .mtl files will be unified in this file. There is no longer a need to reference these MatterPak-sourced files, so they can be archived as a best practice for data storage and backup.



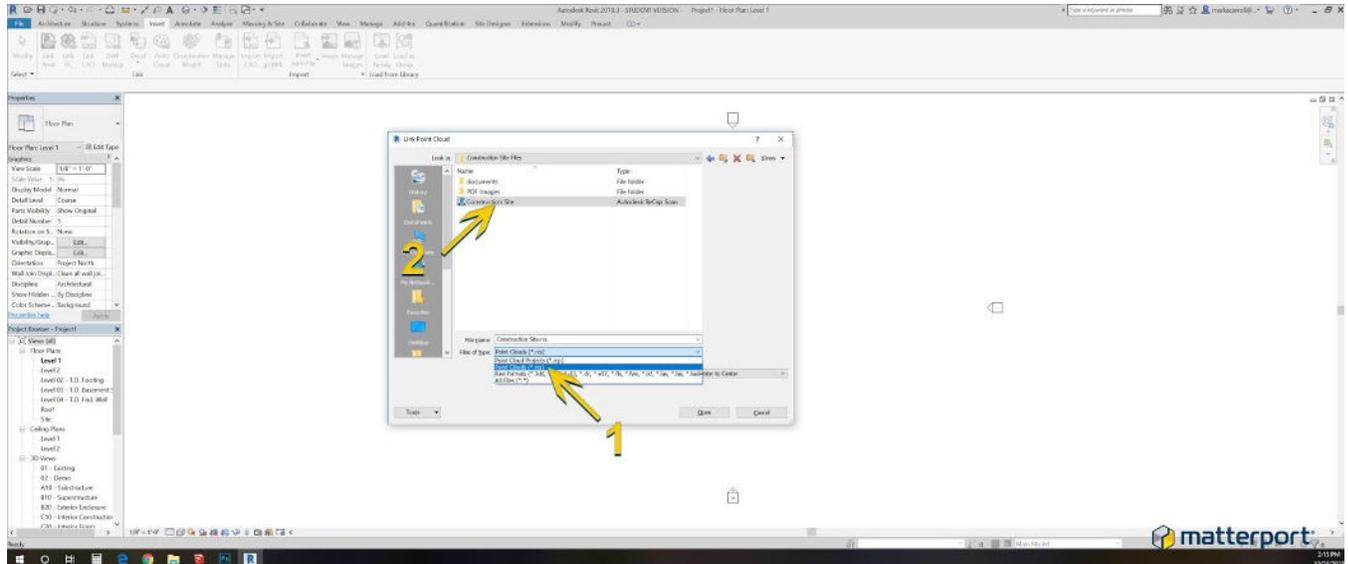


Revit

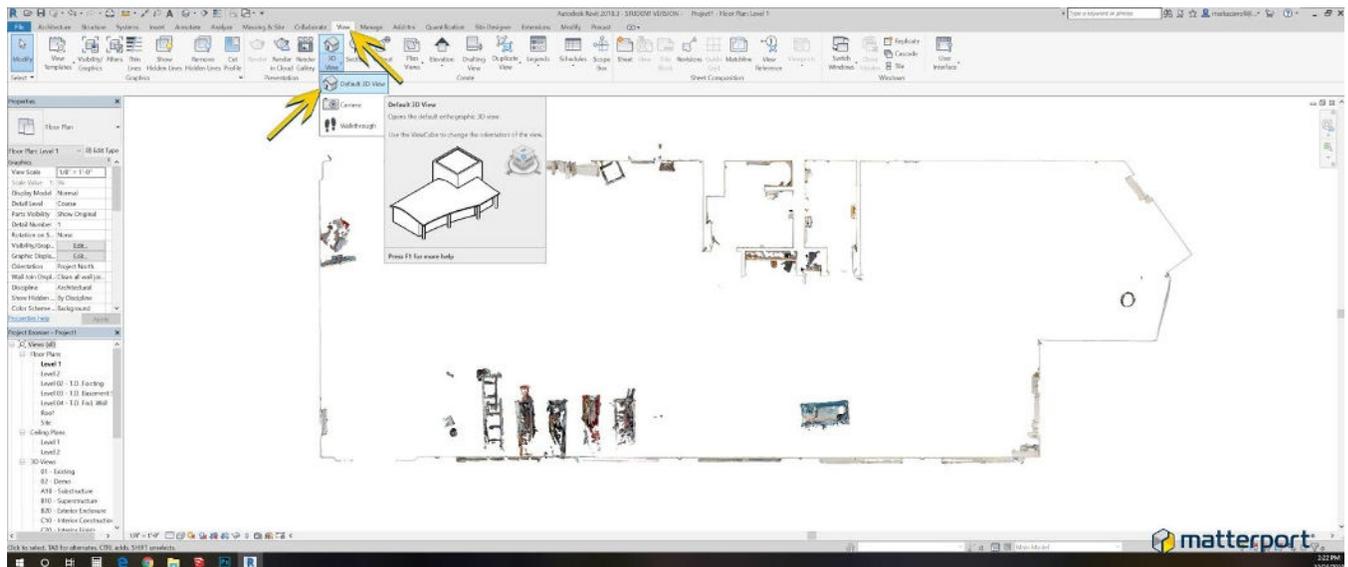
- Open Revit.
- Start a new Project.
- Insert the point cloud by clicking the Insert tab, then click on the Point Cloud text and image that appears as an option.
 - *Reminder* Matterport 3D Point Cloud data must first be opened in Recap and saved as a .rcs file before opening it in Revit.

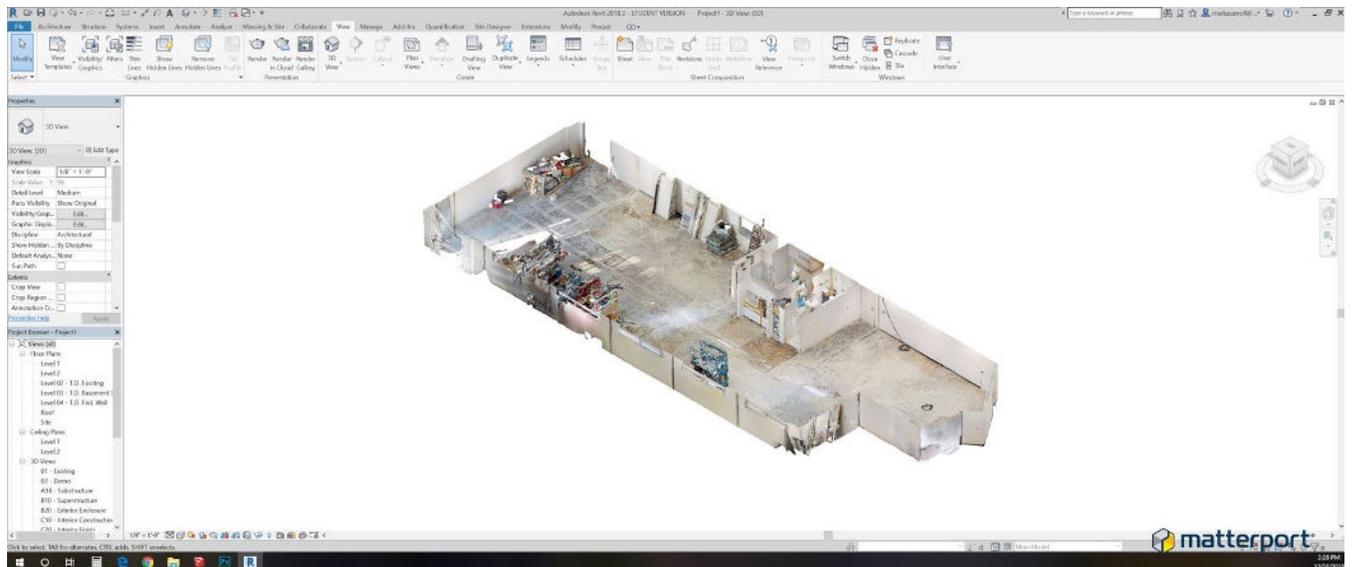


- Locate recently saved .rcs file. This view may not be the default view, so drop down the file type menu to display .rcs files. (see step 1 and 2 displayed below)
- Open the recently saved .rcs file, the one that was created using the contents of the MatterPak .zip file.



- 3D point cloud has been imported.
- 2D view may be default view. To view 3D view click the View drop down, then click the 3D view option.
- Your exported .rcs file has now been successfully imported and rendered in Revit.





Questions or comments on this workflow? Contact Mark Carroll, Matterport Sales Engineer (AEC).