

Introduction

The user guide provides an overview of the OSU Asset Export application and instructions on how to use it. It is recommended that new users of Asset Export read this guide fully before using the application.

OSU Asset Export – Overview

The OSU Asset Export application is a custom utility built within Autodesk Revit. It helps streamline the data extraction from Revit models, making the output more effective within the OSU environment. A simplified output spreadsheet template captures only information that is relevant for the user-selected OSU Revit model.

When the Asset Export application is installed on your device, an **OSU** tab and **OSU Tools** ribbon become available within Autodesk Revit.

To ensure that the Asset Export application extracts the OSU-required parameter data from your model, your Revit project must be set up with the required family and parameter settings. After the setup is complete, when you open a model in a Revit project and use the **OSU Asset Explorer** command, the Asset Export application interrogates the parameter data for the open Revit model and extracts the required data.

The extracted parameter data is displayed in a dialog box. You can review and verify the data but cannot add or modify any parameters or values, at this point. However, you can exclude any unwanted rows of data.

If you notice that the room calculation values are missing or they are incorrect and require some adjustments, you can set up the correct room calculation for the model in Revit and run the export tool again to generate the correct values.

Once the data verification is complete, you can export the data using the **Asset Explorer** button. The data is exported, and the output is displayed on an EXCEL spreadsheet. The output can be reviewed and modified to ensure that the data you submit to OSU is in compliance with the LOD Matrix of BIM Deliverables.

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Using the OSU Asset Export application

The key steps involved in using the Asset Export application are the following:

- Install the OSU Asset Export application.
- Set up your Revit Project as per the LOD Matrix of BIM Deliverables.
- Run the Asset Export application and export the required Model data.

Install the OSU Asset Export Application

Note: *The Asset Export application works only with Autodesk Revit versions 2020 and 2021.*

1. Download the Asset Export application zip from the following link.

https://fod.osu.edu/sites/default/files/osu_bim_pds_tools.zip

2. Install the app on your local device. Run as administrator.
3. The application installs an instance of it for each Revit version (2020 or 2021) available in your device. Any add-ins are located in the following folder:

C:\ProgramData\Autodesk\Revit\Addins\<Revit version>

Set up your OSU Revit Project

You must properly set up your Revit projects with the OSU-preferred families and parameters. This will enable the OSU Asset Export application to extract the required parameter data from a model.

Note: *The scope of Revit setup in this guide is limited to the Model Parameters and Space/Room Calculation settings required specifically for OSU Revit projects. For comprehensive information on how to set up projects in Revit, you may have to use other sources such as Autodesk Revit Help. Links for Autodesk Help are provided below:*

- (<https://help.autodesk.com/view/RVT/2021/ENU/>)
- (<https://help.autodesk.com/view/RVT/2020/ENU/>)

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OSU Revit Model Parameter Settings

When the OSU Asset Export application is run, it exports the model's family parameters and values and outputs them to an EXCEL spreadsheet. In the spreadsheet, the names of the family parameters populate as column headings and their values populate as rows. Currently, there are **nine parameters** (listed in the table below) that OSU considers **mandatory** for all models. These parameters are hard coded in the Asset Export application, and they will always be auto-populated as column headings for all models.

Required Parameters for all Models	
Revit-generated, requires no setup	Admin set up required
1. Revit ExIdentifier	7. Room #
2. Revit Element ID	8. From
3. Revit Name (To be printed on the label)	9. To
4. Asset Description	
5. Building #	
6. Floor #	

The values for the first six parameters are Revit generated and requires no administrator set up. When the Export application is run, these six parameters will always populate with the correct values. However, for parameters 7, 8, and 9, the values are auto-populated based on your Room parameter set up in Revit. Therefore, in Revit, you must set up the Room parameters and the Room Calculation details for the model correctly so that these parameters will have the expected values when the OSU Asset Export application is run by the end user.

Space/Room Calculation Settings

Revit uses Spaces for MEP models and Rooms for architectural models. You must ensure that the Revit projects for OSU has been set up properly with the required building components and each component is located appropriately in relation to the Room or Space. Also, ensure that you relate the spaces for the MEP model to the Room names and numbers that were used in the architectural model.

Room Settings in Revit

For some components like doors and windows, the From Room and To Room values are required to understand whether it is swinging out of or into the room. So, ensure that your Revit projects for OSU have been set up properly with the From Room and To Room parameters.

The set up for the Room parameters also includes turning on the **Room Calculation Point** and using control points to move a component to the correct location within a room. When the calculation point is turned on, Revit automatically calculates the room location based on the component's control points location and updates the values for the From Room and To Room parameters. If you find that the Revit-calculated values are incorrect, you should relocate the component to the appropriate spot.


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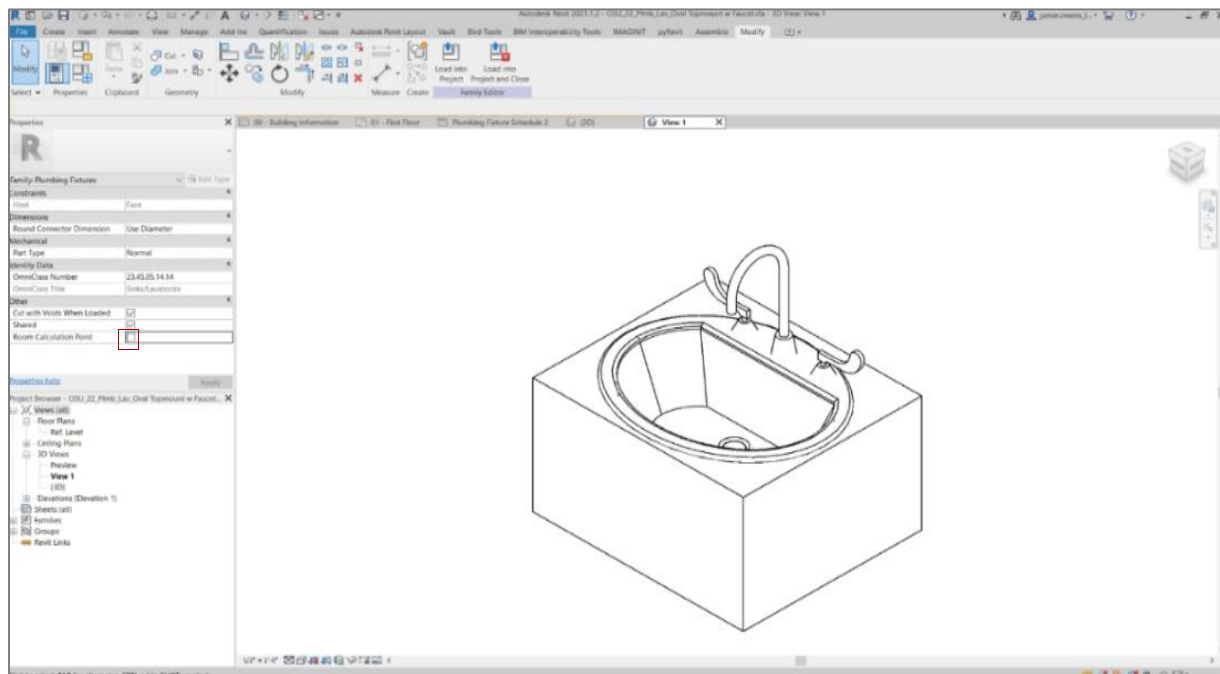
When the OSU Asset Export application is run, it uses the values of the From Room and To Room parameters to auto-populate the values respectively for the **From** and **To** fields in the spreadsheet. If such values are not available, the fields are left blank.

The following points should be considered when setting up doors for a room:

- Note:**
- Doors should be associated with the room they are going into or coming from (excluding corridors).
 - If a door is going from one room to another, the larger room shall take precedent (i.e., sub rooms, closets, storage space, etc.)
 - The only time a corridor will be listed as the associated room is when the door is between two corridors or other unique conditions that may arise on a project.

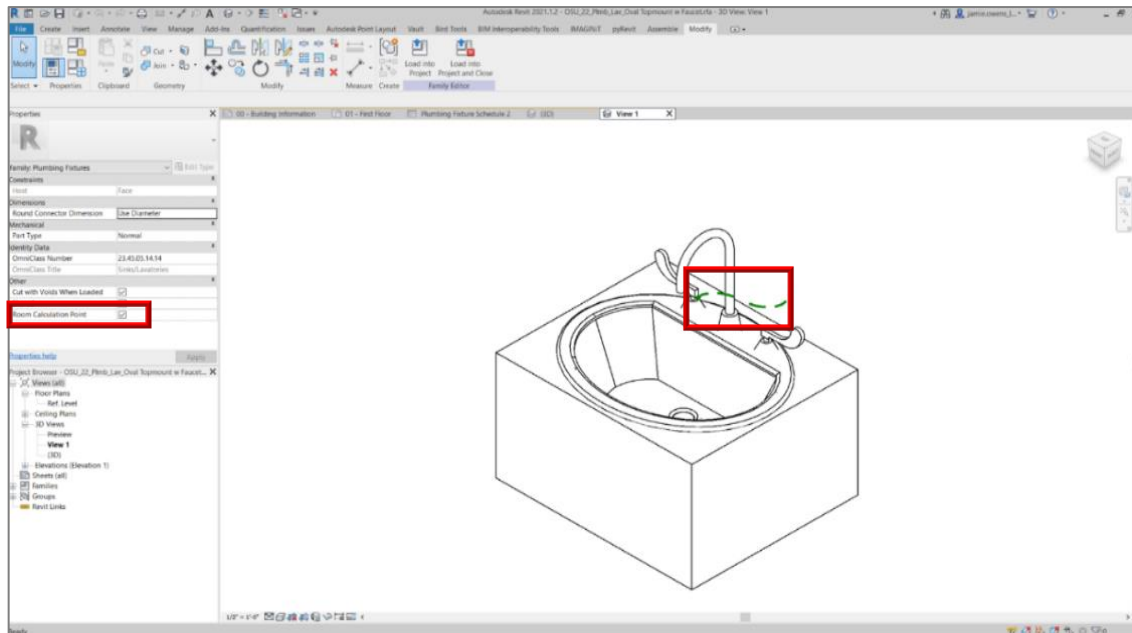
How to set up Room Calculation for your Revit Model

1. In Revit, open the family in the Drawing area to edit the component.
2. In the **Modify | Element** tab > **Mode** panel, click  (Edit Family).
3. In the **Family Editor**, open the family in its floor plan view.
4. In the **Properties** palette, in the **Other** section, verify the **Room Calculation Point** checkbox. If it is clear (disabled) as shown below, turn it on by selecting the checkbox.

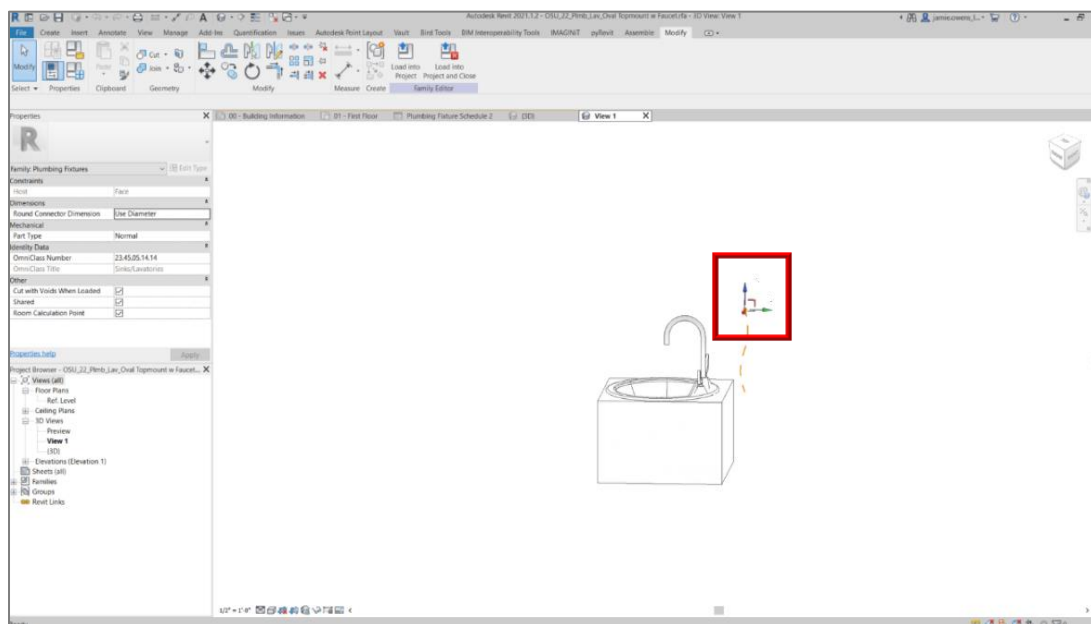


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- When the **Room Calculation Point** checkbox is turned on, a dashed line appears with control points on all the ends that can be controlled. (For example, when editing components like doors or windows, a dashed line appears with an arrow-shaped control point on either end, with the direction of the arrow indicating the From and To direction of the door in relation to the room.) The image below shows a green dashed line with the control point as a dot on one end. This means that this component can be moved only using that single control point.



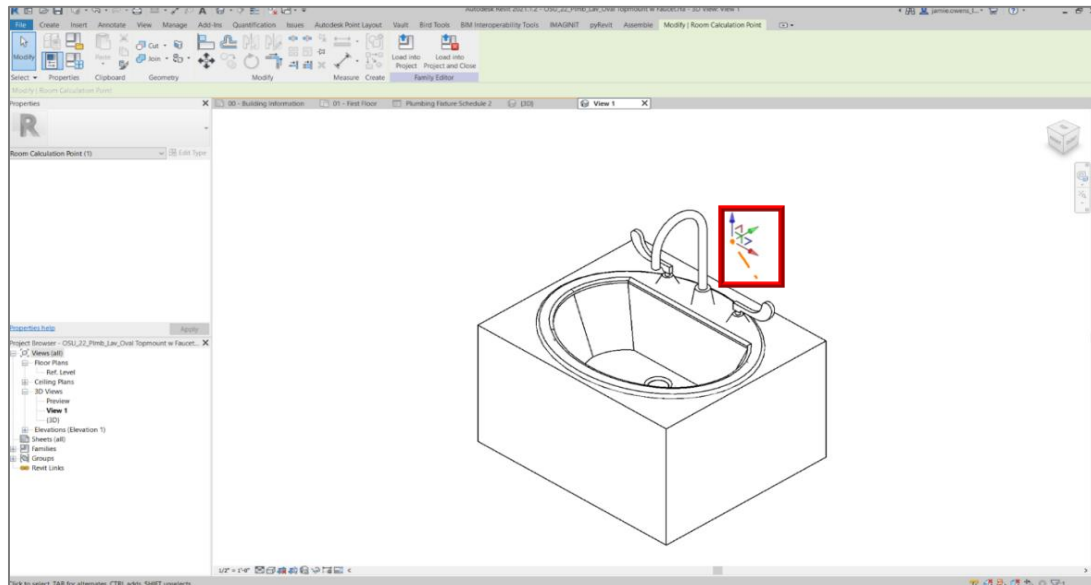
- Now, click on the dashed line and the control point expands to show arrows for the different axes (as shown in the image below).



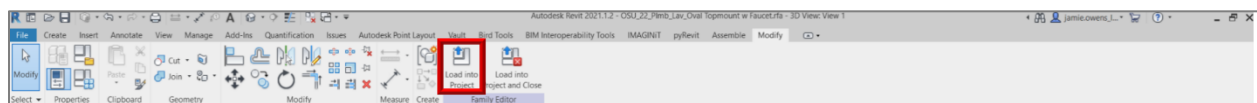
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- By moving the arrows, you can drag and relocate the component to the required location. When placing the component in the project, make sure that neither is it covering nor is it being covered or hindered by any of the surrounding geometry.

Note: To adjust the depth/height (Z-axis settings), view the component in a 3D view. When the control points appear, you will notice that it includes an additional arrow (as shown in the image below). Move that control point and relocate the component as required.



- To load it back into the project, click  (Load into Project) in the **Modify** tab > **Family Editor** panel.




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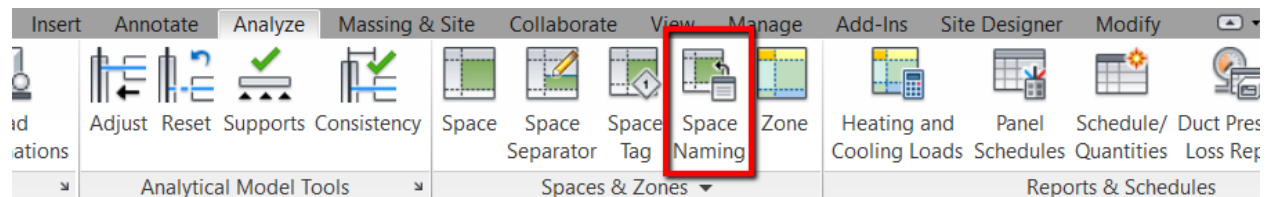
Space Settings in Revit

In Revit, the **Space Naming** tool for an MEP model can be used to automatically synchronize the Rooms and Spaces in each model. That is, when the **Space Naming** tool is run, Revit automatically assigns the names and numbers from architectural rooms to MEP spaces. When the OSU Asset Export application is run, it uses the values for the **Space Name** and updates the **Room #** field in the spreadsheet with this value.

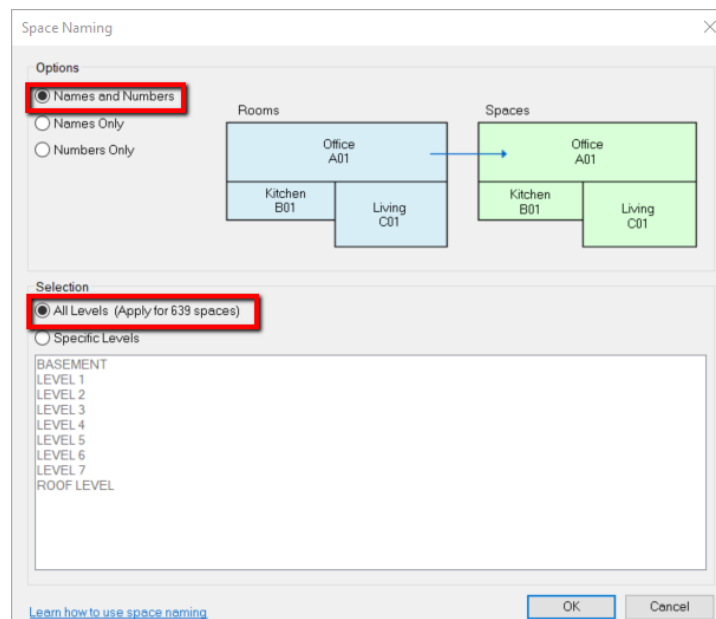
How to set up Spaces for your Revit Model

To synchronize the Rooms and Spaces in a model, do the following:

1. In Revit, open the MEP model for which you want to rename or renumber the spaces.
2. In the **Analyze** tab > **Spaces & Zones** panel, click  (Space Naming), as shown in the image below.



3. In the **Space Naming** dialog, select **Names and Numbers** in the **Options** pane and **All Levels** in the **Selection** pane. Click **OK**.



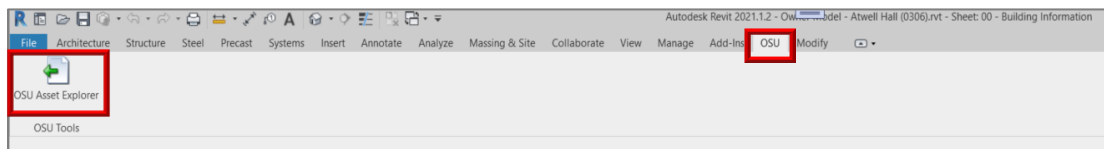
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Run the Asset Export application and export Model data

1. Open your Autodesk Revit project from which you need to extract the Model data.

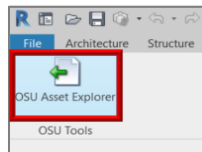
Note: Ensure that the base model has all other project models linked in (including all MEP, equipment, etc., that have assets that OSU requires per the LOD Matrix of BIM Deliverables).

2. Click on the **OSU** tab on your Revit menu, and the **OSU Tools** ribbon displays as shown in the image below. You will notice that it has a single button - the **OSU Asset Explorer** button.



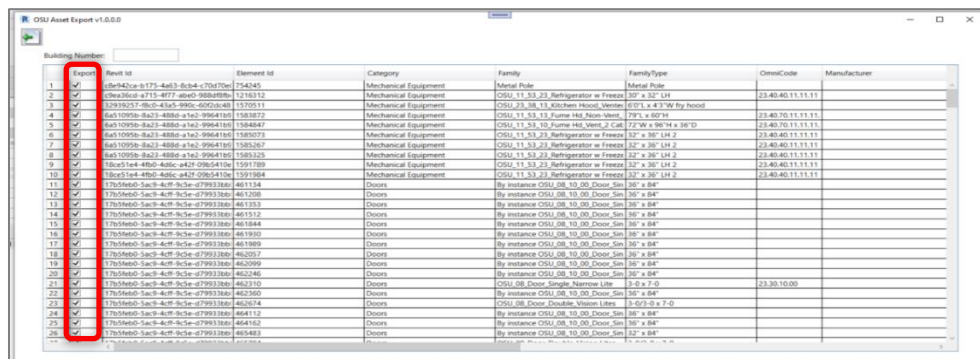
Note: If you do not see the **OSU Tools** ribbon, contact your administrator for assistance with installing the Asset Export tool.

3. Click on the **OSU Asset Explorer** button on the **OSU Tools** ribbon (shown in the image below).



4. The **OSU Asset Export** dialog pops up with the parameter data extracted from the model, as shown in the image below.

Note: The auto-populated parameter values are read-only, and you cannot add new values or modify any values, at this point. You will also note that, currently, all the rows are automatically selected for export (indicated by the check mark in the **Export** check box at the beginning of the rows). You can, however, exclude any irrelevant rows by clearing the corresponding **Export** check box.



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5. Review the data to determine if you want to export all the rows to the EXCEL spreadsheet. If you want to sort the data by a specific column, click that column header to sort in the ascending order. Click the column header again to change the sorting order to descending.

6. To exclude any rows, do the following:

- Identify the rows that you do not want to export.
- To exclude a single row, clear the check box for that row.
- To exclude multiple rows, highlight the required rows (shown in the first image below), then right-click and select **Uncheck Selected** from the dropdown menu (shown in the second image below).

Note:

- Hold down the <Shift> key when selecting multiple rows that are contiguous.
- Hold down the <Ctrl> key when selecting multiple rows that are non-contiguous.
- If you excluded any rows by mistake, highlight the ones to be included, right-click on them and select **Check Selected** from the dropdown menu.

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Building Number:

Export	Revit Id	Element Id	Category	Family	FamilyType	OmniCode	Manufacturer
<input checked="" type="checkbox"/>	c8e942ca-b175-4a63-8cb4-c70d70e	754245	Mechanical Equipment	Metal Pole			
<input checked="" type="checkbox"/>	c9ea36cd-a715-4777-abe0-9880f8b	1216312	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	30" x 32" LH	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	32939257-fb0d-43a5-990c-60f2dc48	1570511	Mechanical Equipment	OSU_23_38_13_Kitchen Hood, Vent	60"L x 43"W fry hood		
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1583872	Mechanical Equipment	OSU_11_53_13_Fume Hd, Non-Vent	79"L x 60"H	23.40.70.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1584847	Mechanical Equipment	OSU_11_53_10_Fume Hd, Vent, 2 Cat	72"W x 96"H x 36"D	23.40.70.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1585073	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1585267	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1585325	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	18ce51e4-4fb0-4d6c-a42f-09b5410e	1591789	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	18ce51e4-4fb0-4d6c-a42f-09b5410e	1591984	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461134	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461208	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461353	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461512	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461844	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461930	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461989	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462057	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462099	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462346	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462360	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"	23.30.10.00	
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462360	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462374	Doors	OSU_08_Door_Double_Vision Lite	1-0/3-0 x 7-0		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	464112	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	464162	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	465483	Doors	By instance OSU_08_10_00_Door_Sin	32" x 84"		

OSU Asset Export v1.0.0.0

Building Number:

Export	Revit Id	Element Id	Category	Family	FamilyType	OmniCode	Manufacturer
<input checked="" type="checkbox"/>	c8e942ca-b175-4a63-8cb4-c70d70e	754245	Mechanical Equipment	Metal Pole			
<input checked="" type="checkbox"/>	c9ea36cd-a715-4777-abe0-9880f8b	1216312	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	30" x 32" LH	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	32939257-fb0d-43a5-990c-60f2dc48	1570511	Mechanical Equipment	OSU_23_38_13_Kitchen Hood, Vent	60"L x 43"W fry hood		
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1583872	Mechanical Equipment	OSU_11_53_13_Fume Hd, Non-Vent	79"L x 60"H	23.40.70.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1584847	Mechanical Equipment	OSU_11_53_10_Fume Hd, Vent, 2 Cat	72"W x 96"H x 36"D	23.40.70.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1585073	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1585267	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	6a51095b-8a23-48bd-a1e2-99641b5	1585325	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	18ce51e4-4fb0-4d6c-a42f-09b5410e	1591789	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	18ce51e4-4fb0-4d6c-a42f-09b5410e	1591984	Mechanical Equipment	OSU_11_53_23_Refrigerator w Freeze	32" x 36" LH 2	23.40.40.11.11.11	
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461134	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461208	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461353	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461512	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461844	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461930	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	461989	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462057	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462099	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462346	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462360	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"	23.30.10.00	
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462360	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	462374	Doors	OSU_08_Door_Double_Vision Lite	3-0/3-0 x 7-0		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	464112	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	464162	Doors	By instance OSU_08_10_00_Door_Sin	36" x 84"		
<input checked="" type="checkbox"/>	17b5feb0-Sac9-4cfr-9c5e-d79933bb	465483	Doors	By instance OSU_08_10_00_Door_Sin	32" x 84"		

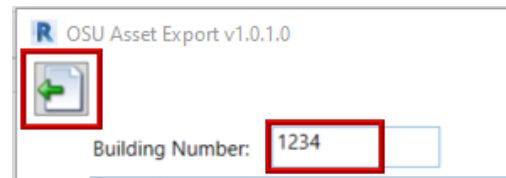
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7. Once the irrelevant rows are excluded, verify each remaining row, and ensure that the required parameters (listed below in the table) or their values are not missing.

Required Parameters for all Models	
Revit-generated parameter values - always correct	Values populated from the model's family setup – need review and verification
1. Revit ExIdentifier	7. Room #
2. Revit Element ID	8. From
3. Revit Name (To be printed on the label)	9. To
4. Asset Description	
5. Building #	
6. Floor #	

Note: All nine parameters (listed above) and the Revit-generated values for the first six parameters will always be populated. The Room Number or the Door values could be incorrect or missing, if the room calculation details for the model has not been set up correctly.

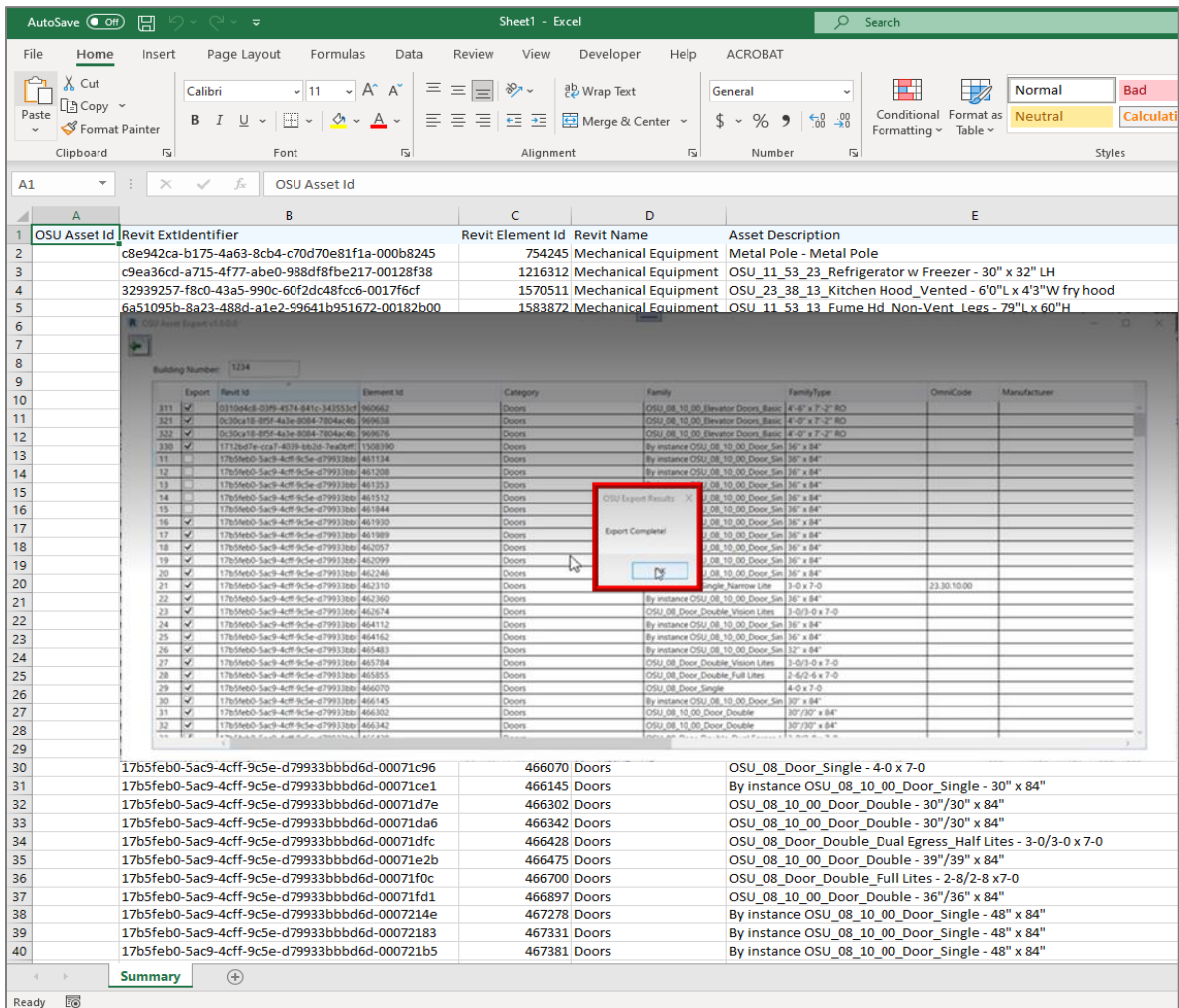
8. After the verification is complete, enter the building number in the **Building Number** field and click the **Extract** button (as shown in the image below).



Important: The **Building Number** is mandatory, and you must enter the required building number prior to exporting the output to EXCEL. Note that only the parameter values for the rows that remain checked at the time of clicking the **Extract** button will be extracted by the Asset Export application.

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- An EXCEL spreadsheet opens up with the exported fields and values. When the export is complete, an **Export Complete** message displays (as shown in the image below). Click **OK**.



- Minimize the **OSU Asset Export** dialog but do not close it yet. Review the output in the EXCEL spreadsheet and modify, if required.

Important: OSU expects that you clean up the data in compliance with the LOD Matrix of BIM Deliverables, prior to submitting it to OSU.

When modifying the Excel spreadsheet, do not change any of the column headings.

Note: If you find that some of the rows that you expected to see are missing in the spreadsheet, go back to the **OSU Asset Export** dialog that is still open. Include the missing rows by right clicking on them and selecting **Check Selected** from the dropdown menu. Then, re-export the data by clicking the **Extract** button.