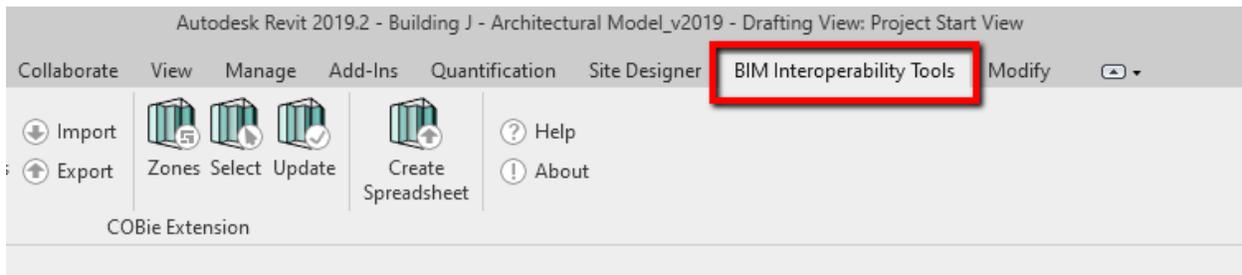


Install COBie Extension Tool

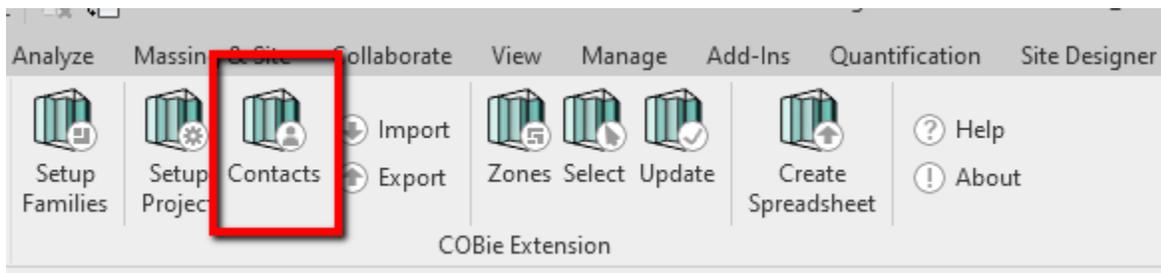
Install the COBie Extension for your current version of Revit from the following link.
<http://www.biminteroperabilitytools.com/cobieextensionrevit.php>

Complete in Each Separate Model

- In the ribbon toolbar you will see the BIM Interoperability Tools section



- click "Contacts" button in the COBie Extension section



- Click "Add Contact..."
- Fill in the parameters in the "Required" Section and Optional Section as you see fit
- Change CreatedBy from "<not set>" to the Email user you entered
- When finished select "Save and Close"

OSU COBie Extension Tutorial Revit 2019/2020

Autodesk BIM Interoperability Tools | COBie Extension

AUTODESK COBIE EXTENSION FOR REVIT

Contacts

Create and edit COBie contacts in this Revit model

Contact List

Add Contact...

cmealy@messer.com

Required

CreatedBy: cmealy@messer.com

Email: cmealy@messer.com

Company: Messer Construction Co.

Phone: 513-242-1541

Category: VDC

Optional

GivenName:

FamilyName:

Department:

OrganizationCode:

Street:

PostalBox:

Town:

StateRegion:

PostalCode:

Country:

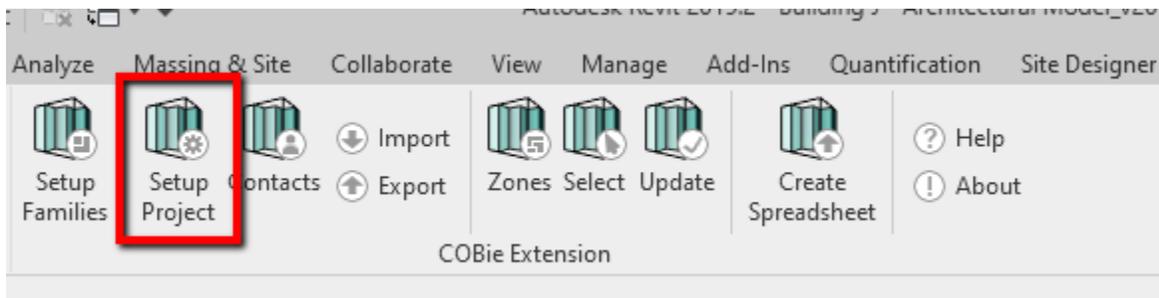
ExternalIdentifier: c6dd0574-fb8f-4946-a22a-736434ec0a05

Cancel Save Save and Close

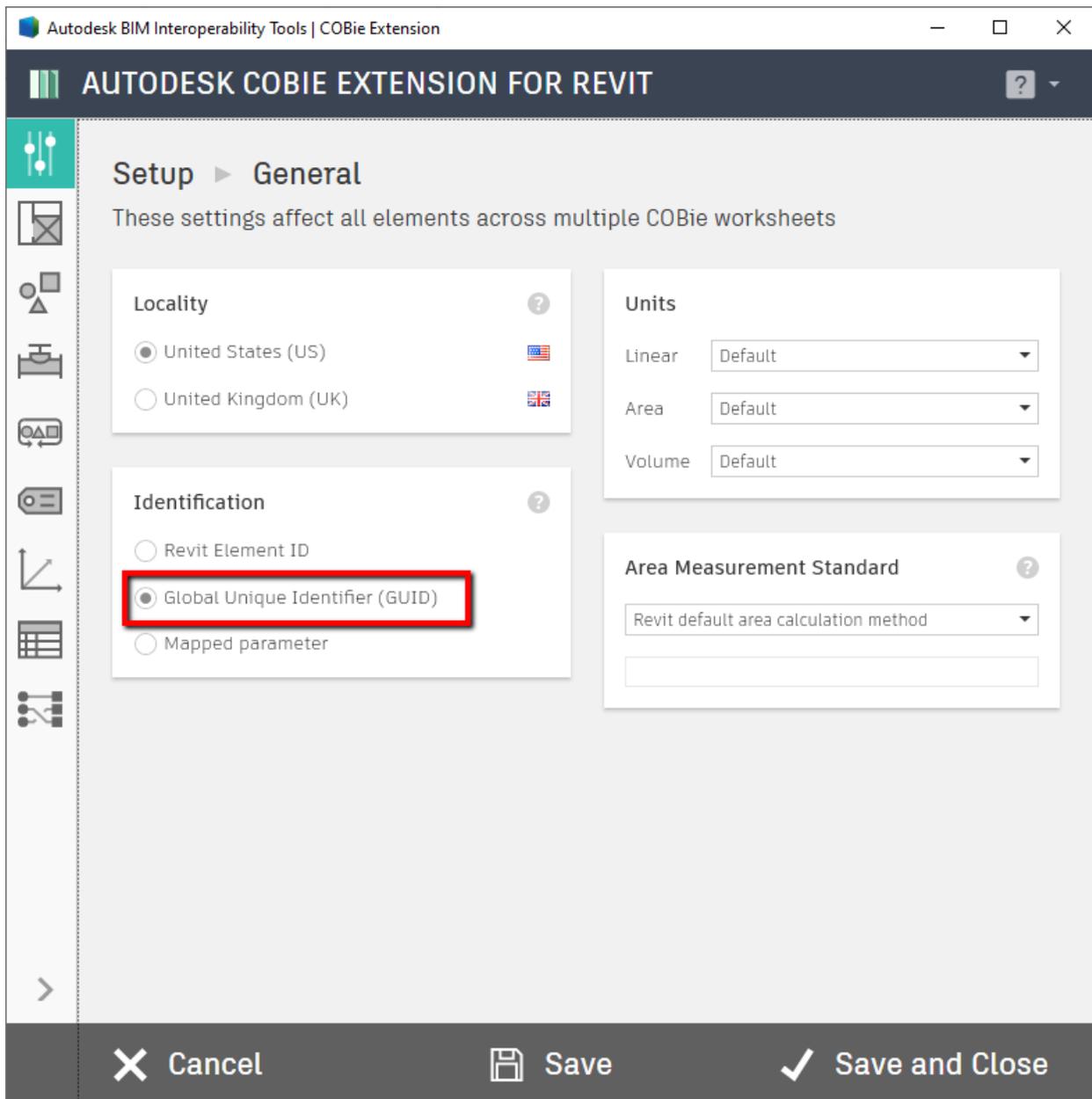
* Visit <https://youtu.be/7aoc7dtOz-Q> if you are having issues with the Manage Contacts function for further instructions.*

- Next click the “Setup Project” button in the COBie Extension section

OSU COBie Extension Tutorial Revit 2019/2020

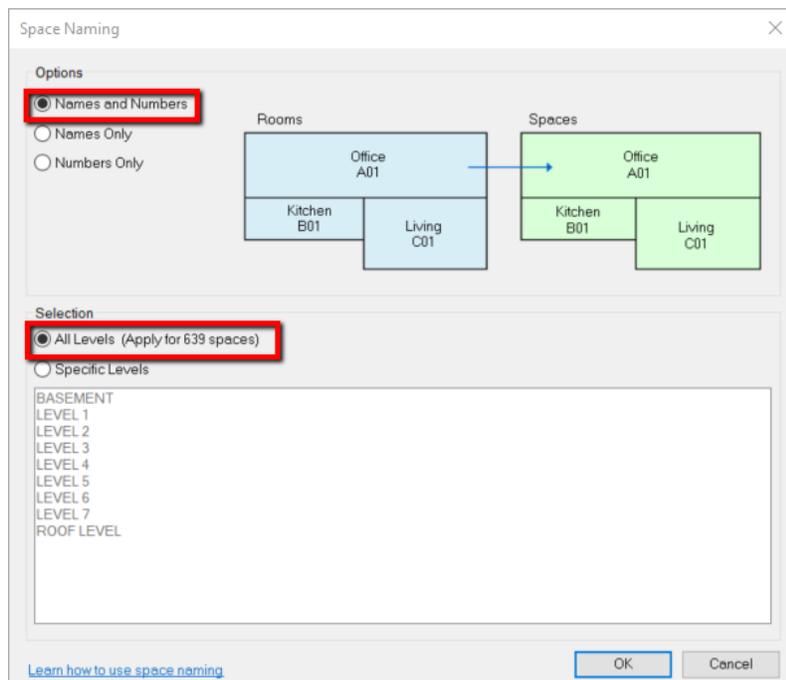
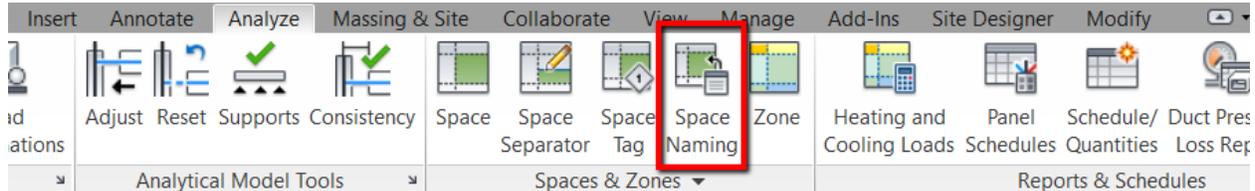


- In the General Tab, make sure the “Identification” option is set to “Global Unique Identifier (GUID)”

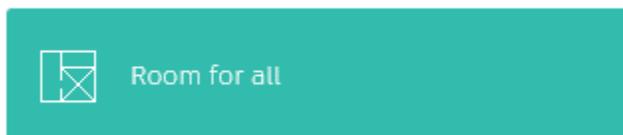


OSU COBie Extension Tutorial Revit 2019/2020

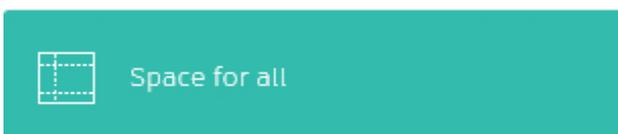
- In Revit the design teams should make sure they have run the Space Naming tool in the Analyze Tab to synchronize the Rooms and Spaces in each model. Be sure to use the default settings in the Space Naming tool, where “Names and Numbers” are selected in the Options pane and “All Levels” is selected in the Selection pane.



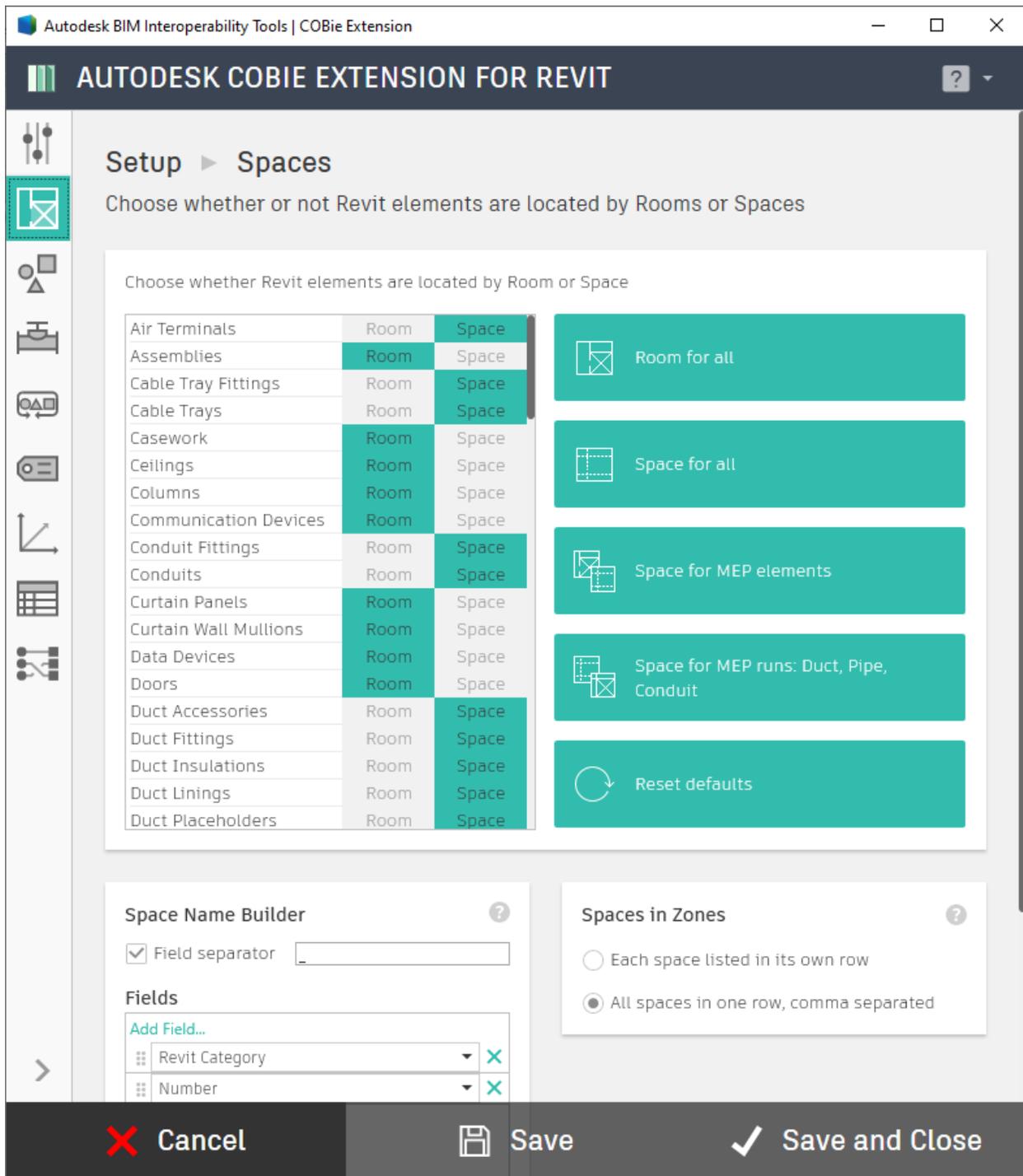
- In the Spaces tab, you will need to define if elements are located in a Room or Space.
- If you are in an Architectural Model use “Select Rooms for all”



- If you are in a MEP Model then use “Select Spaces for all”

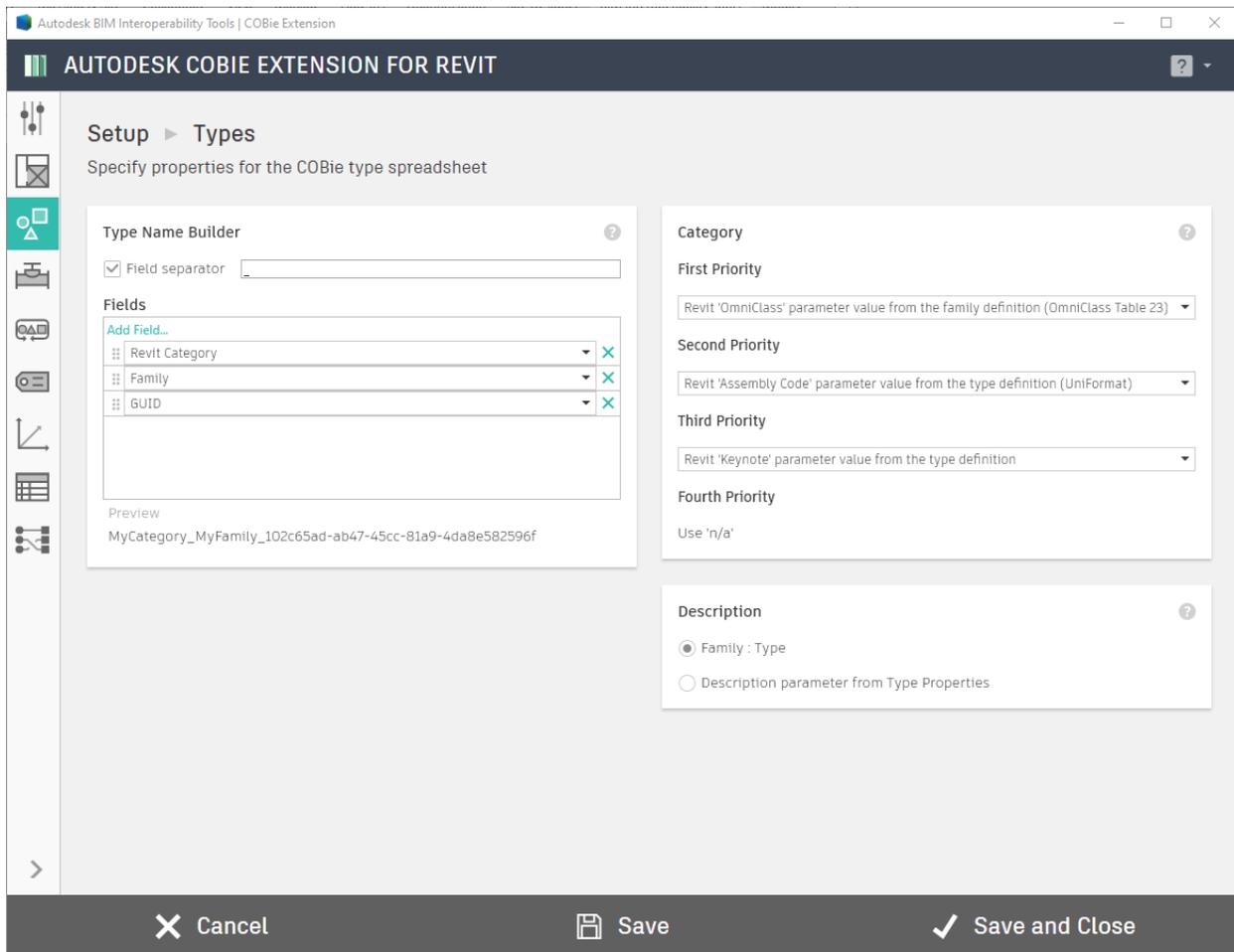


OSU COBie Extension Tutorial Revit 2019/2020



- In the Types tab, make sure Description is set to "Family:Type" (which is the default setting), and make sure the Type Name Builder: Fields is set to "Revit Category", "Family", and "GUID"

OSU COBie Extension Tutorial Revit 2019/2020



- All other tabs within this Setup dialog box will remain unchanged and using the default settings.
- Click “Save and Close”
- You will not need to open the “Modify Parameter Mappings for this Project” section as OSU has already captured these settings in an .XML file that can be imported into your project. You can download this file from the FOD website. File is located under the Vendor Resources > Design Guidelines, Specifications, Standards > Building Information Modeling (BIM) > OSU BIM PDS Tools (zip) file.
<https://fod.osu.edu/resources>

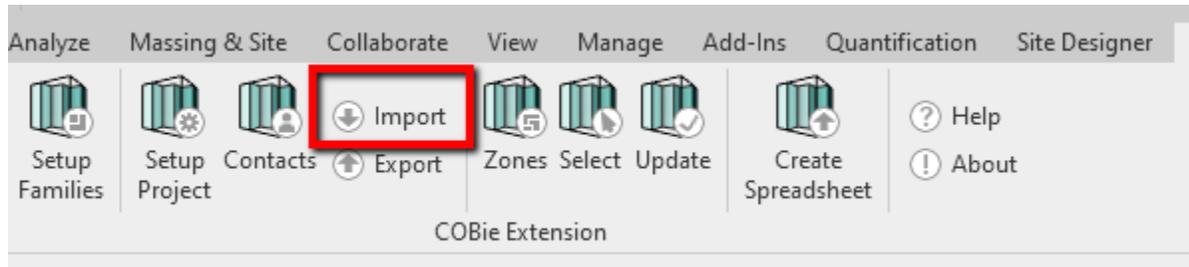
***Please Note*:** If you are working on an existing project that didn't implement the COBie Extension from the outset in you will need to follow the steps in Appendix 1 at the end of this document.

***Please Note*:** Empty Schedules are to be expected, the schedules are showing the COBie.parameters. The parameters start out empty and stay empty until they are filled in either

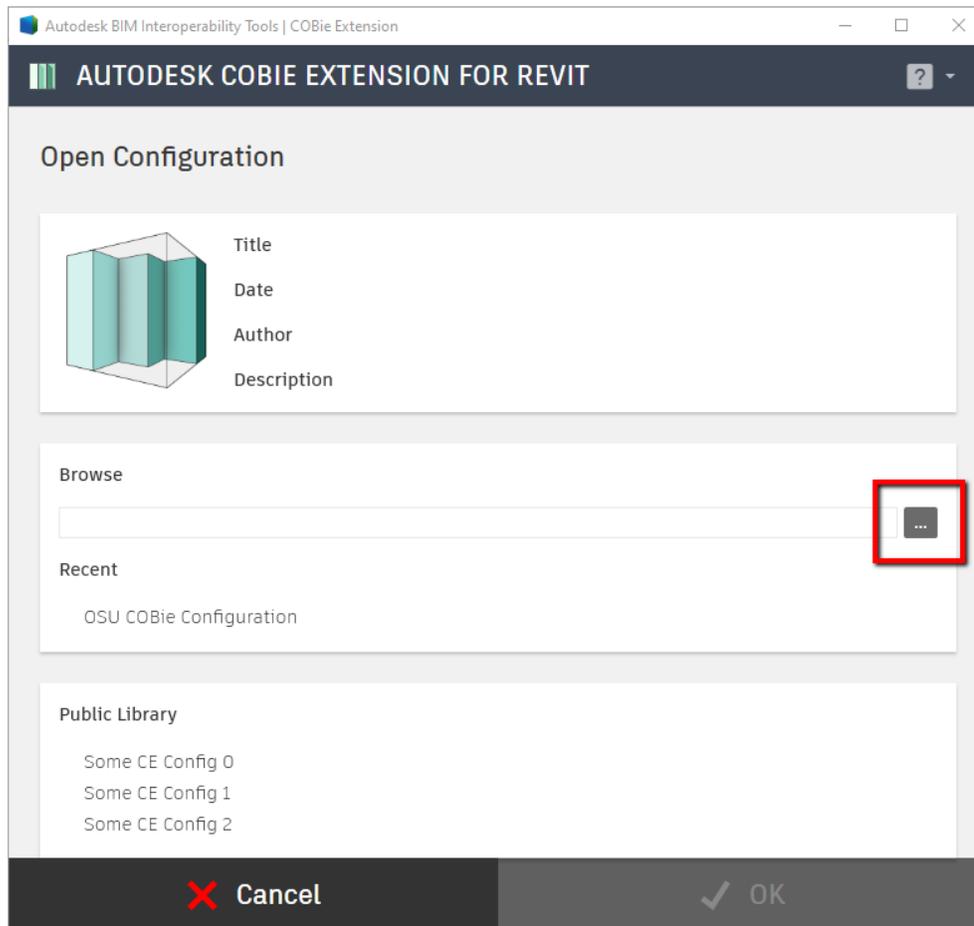
OSU COBie Extension Tutorial Revit 2019/2020

manually or by running the Update tool. For more information on the Update feature please visit <https://youtu.be/xa7utLOcnss>

- Go to Import button to search for

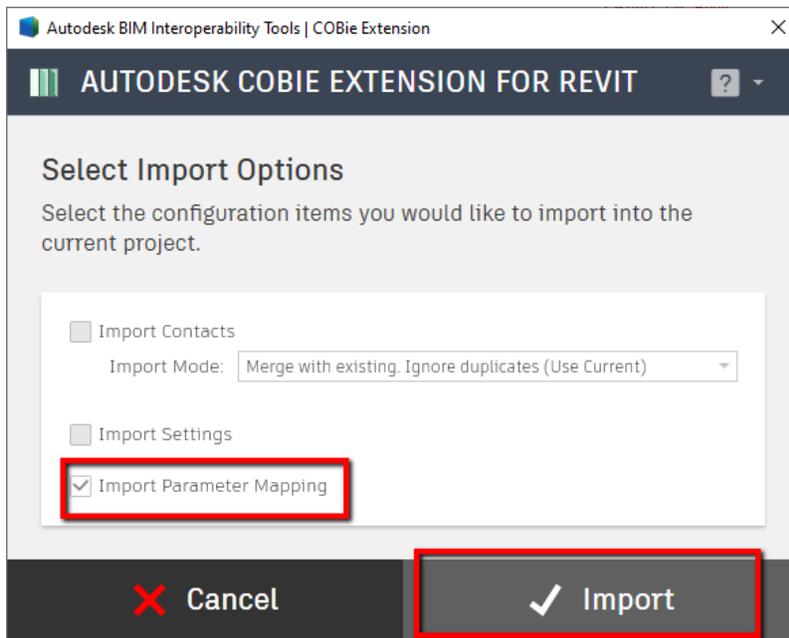


- Click the “...” to browse for the “OSU COBie Configuration.xml” file that was downloaded above. And Hit “Ok”

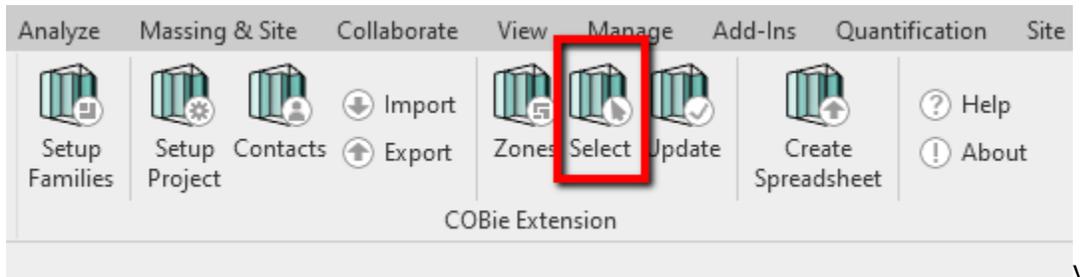


- Check “Import Parameter Mapping” then choose Import.

OSU COBie Extension Tutorial Revit 2019/2020

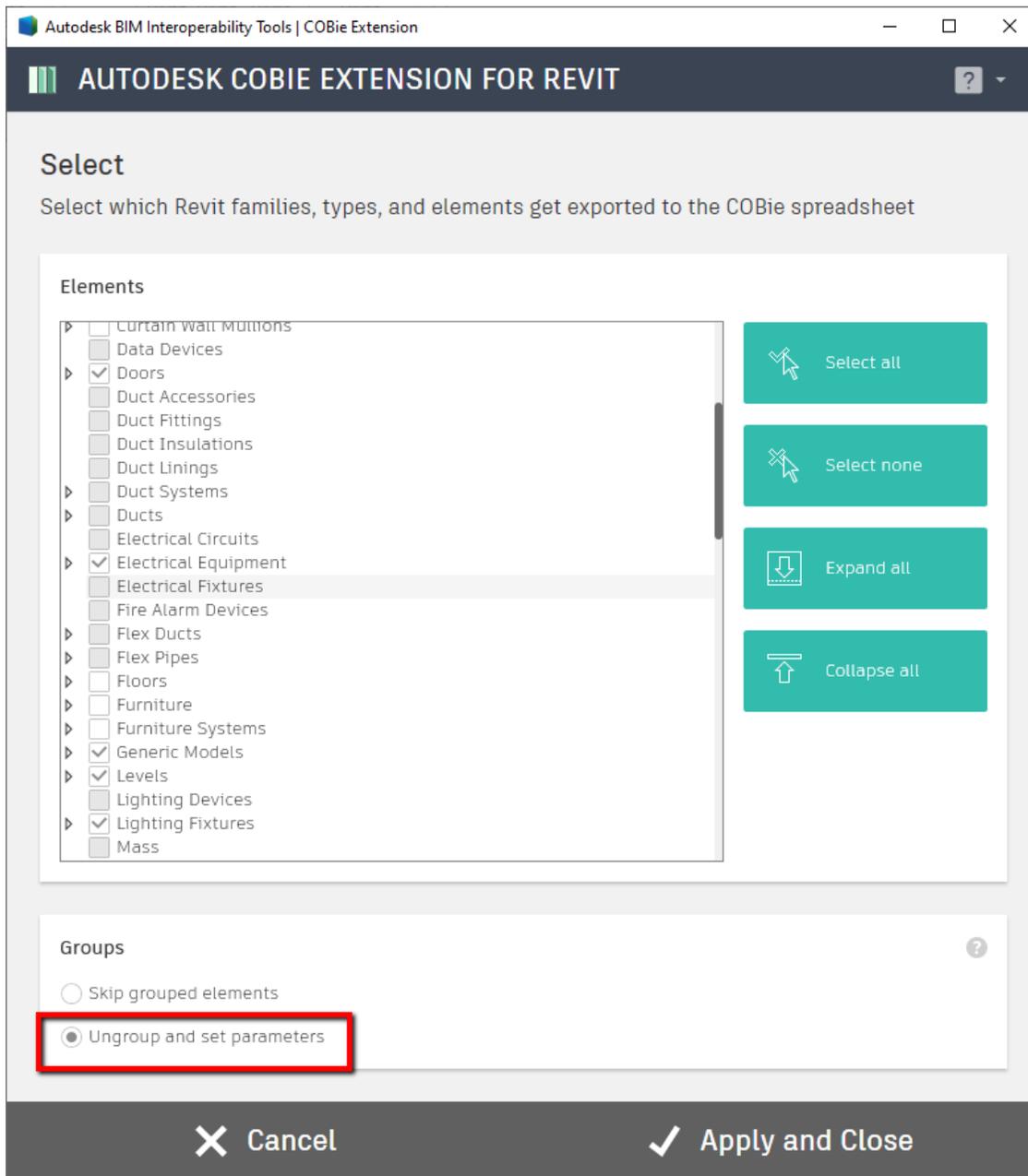


- Next go to the “Select” tool.



- Select which Revit families, types and elements will get exported to the COBie spreadsheet. Only check the following elements in the dialog box

Data Devices	Mechanical Equipment
Doors	Nurse Call Devices
Electrical Equipment	Pipe Accessories
Electrical Fixtures	Plumbing Fixtures
Fire Alarm Devices	Rooms
Generic Models	Security Devices
Levels	Spaces
Lighting Devices	Specialty Equipment
Lighting Fixtures	Telephone Devices

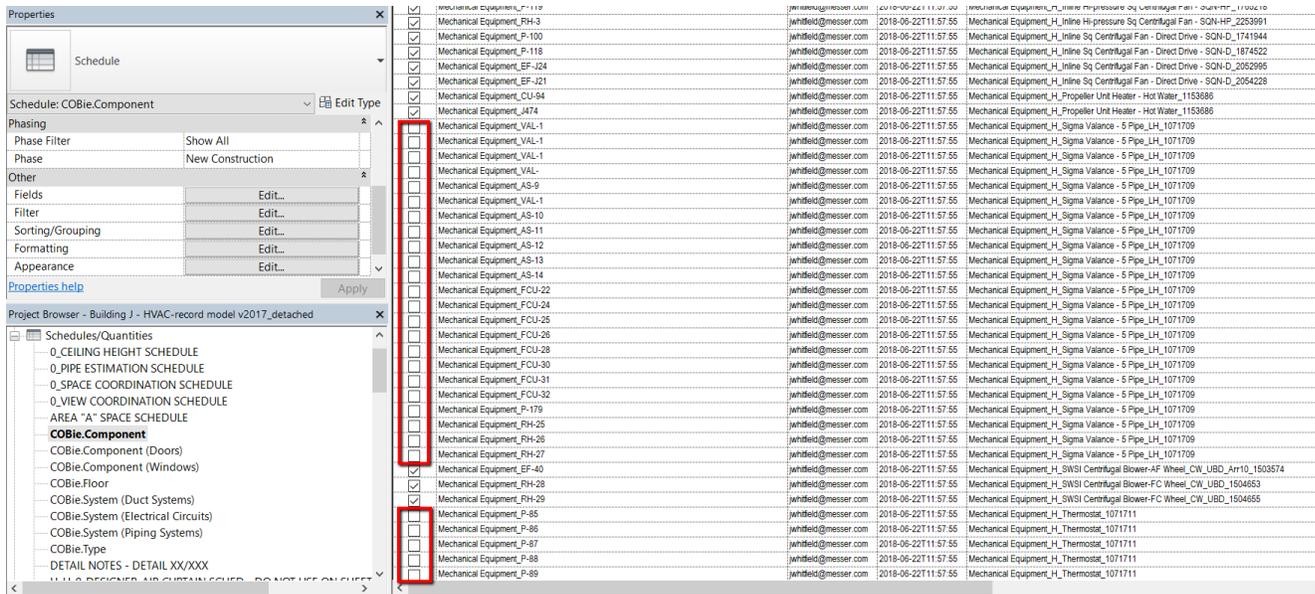


- Make sure the “Ungroup and set parameters” is selected.
- Select “Apply and Close”
- The categories above provide the overall intent of what should be exported from the model, but each design and construct team shall coordinate to make sure the export is in alignment with the items defined in the Asset Tag & COBie Required Column of the LOD Matrix of BIM Deliverables Worksheet, which can be downloaded here: <https://pare.osu.edu/servicesfacilities-information-and-technology-services/building-information-modeling>.

OSU COBie Extension Tutorial Revit 2019/2020

Type and Component Clean Up

- It will be expected that some modeled components will need to be unchecked in the COBie.component Schedule in the Revit file before exporting the final COBie file in order to be compliant with the LOD Matrix of BIM Deliverables. The blank check boxes (highlighted with red boxes) in the COBie field in the image below will not be exported to the final COBie sheet.



Levels Clean Up

- Levels should be checked in only the architectural model to remove any duplication that may occur.

Door Selection and Location Clean Up

- The COBie Extension does not understand which doors are fire rated or which room a door should be associated with, and will assign both rooms on either side of the door in the space column of the COBie worksheet. To resolve these items prior to submitting to OSU the following steps should be followed.
 - Prior to exporting the COBie worksheet, non-fire rated doors should be unchecked in the same fashion as the components in the above step, so they are not exported from the model.

OSU COBie Extension Tutorial Revit 2019/2020

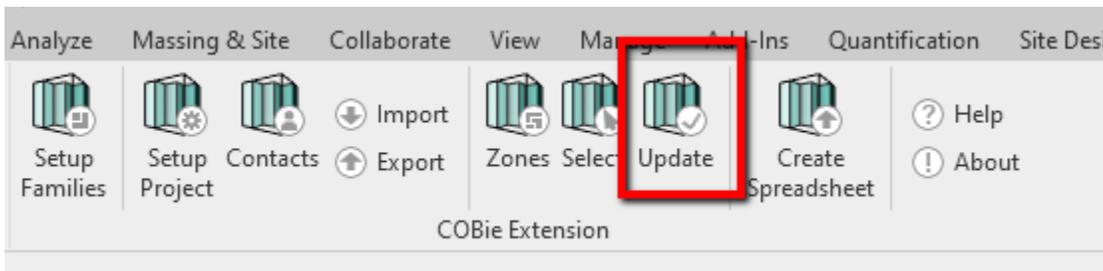
<COBie.Component (Doors)>

This schedule includes the default parameters defined by the Autodesk COBie Extension for Revit. If you have defined any Mapped Parameters in the COBie Extension, they will not be reflected here. You can manually add and remove fields to this schedule and have no impact on your exported COBie spreadsheet.

COBie	NAME	CREATEDBY	CREATEDON	TYPE	NAME	SPACE	DESCRIPTION	SERIALNUMBER	INSTALLATIONDATE	WARRANTYSTARTDA	TAGNUMBER	BARCODE	ASSETIDENTIFIER	Door Rating
✓	Doors_541	chome@meser.com	2018-02-01T04:38.08	Door_Curtain Wall Sgl Glass	350868	W/A Rooms_X140								
✓	Doors_542	chome@meser.com	2018-02-01T04:38.08	Door_Curtain Wall Sgl Glass	350868	W/A Rooms_X140								
✓	Doors_544	chome@meser.com	2018-02-01T04:38.08	Door_Curtain Wall Sgl Glass	350868	W/A Rooms_X140								
✓	Doors_545	chome@meser.com	2018-02-01T04:38.08	Door_Curtain Wall Sgl Glass	350868	W/A Rooms_X140								
✓	Doors_1103	chome@meser.com	2018-02-01T04:38.08	Door_Curtain Wall Sgl Glass	350868	Rooms_100.W/A								
✓	Doors_1105	chome@meser.com	2018-02-01T04:38.08	Door_Curtain Wall Sgl Glass	350868	Rooms_100.W/A								
✓	Doors_530	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Alumnu_607	Rooms_X102.W/A								90 MIN
✓	Doors_884	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Solid_Alumnu	Rooms_X107C.R								-
✓	Doors_885	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Solid_Alumnu	Rooms_X107C.R								-
✓	Doors_886	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Solid_Alumnu	Rooms_X107C.R								-
✓	Doors_887	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Solid_Alumnu	Rooms_X107C.R								-
✓	Doors_888	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Solid_Alumnu	Rooms_X107C.R								-
✓	Doors_890	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Solid_Alumnu	Rooms_X107C.R								-
✓	Doors_891	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_DoubleDoor	Solid_Alumnu	Rooms_X107C.R								-
✓	Doors_209	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_SingleDoor	Alumnu_6076	Rooms_100.W/A								-
✓	Doors_209	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_SingleDoor	Alumnu_6076	Rooms_100.W/A								-
✓	Doors_249	chome@meser.com	2018-02-01T04:38.08	Door_CurtainWall_SingleDoor	Alumnu_6286	Rooms_160A.Pg								-
✓	Doors_354M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_354.Roo								20 MIN
✓	Doors_353M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_X307C.R								20 MIN
✓	Doors_354M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_354.Roo								20 MIN
✓	Doors_453M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_X406C.R								20 MIN
✓	Doors_554M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_554.Roo								20 MIN
✓	Doors_553M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_X506C.R								20 MIN
✓	Doors_554M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_554.Roo								20 MIN
✓	Doors_653M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_X606C.R								20 MIN
✓	Doors_754M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_754.Roo								20 MIN
✓	Doors_753M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271079	Rooms_X706C.R								20 MIN
✓	Doors_959M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271089	Rooms_X906C.R								45 MIN
✓	Doors_1049M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271089	Rooms_248M.Pg								90 MIN
✓	Doors_955	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271089	Rooms_955.Roo								45 MIN
✓	Doors_118M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Double	2271089	Rooms_118M.Pg								45 MIN
✓	Doors_207C	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_X270A.R								45 MIN
✓	Doors_269	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_269.Roo								45 MIN
✓	Doors_269	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_269.Roo								45 MIN
✓	Doors_309M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_309M.Pg								45 MIN
✓	Doors_011M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_011M.Pg								45 MIN
✓	Doors_409M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_409M.Pg								45 MIN
✓	Doors_509M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_509M.Pg								20 MIN
✓	Doors_509M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_509M.Pg								20 MIN
✓	Doors_709M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_709M.Pg								20 MIN
✓	Doors_207A	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268745	Rooms_X270.R								45 MIN
✓	Doors_143S	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_X143S.R								90 MIN
✓	Doors_248S	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_X248S.R								90 MIN
✓	Doors_158J	chome@meser.com	2018-01-25T09:01:12	Door_Flush_Single	2268751	Rooms_158J.Pg								20 MIN
✓	Doors_114M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_X114S.R								45 MIN
✓	Doors_431M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_431M.Pg								45 MIN
✓	Doors_343S	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_X343S.R								90 MIN
✓	Doors_309M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_309M.Pg								45 MIN
✓	Doors_243S	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_X243S.R								90 MIN
✓	Doors_331M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_331M.Pg								45 MIN
✓	Doors_316J	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_316.Roo								45 MIN
✓	Doors_531M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_531M.Pg								20 MIN
✓	Doors_531M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_531M.Pg								20 MIN
✓	Doors_731M	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_731M.Pg								20 MIN
✓	Doors_416J	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_416.Roo								45 MIN
✓	Doors_516J	chome@meser.com	2018-02-01T04:38.08	Door_Flush_Single	2268751	Rooms_516.Roo								20 MIN

- Once in Excel, only one room number should be listed in the space column. 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.

- Next you will click the “Update” button



OSU COBie Extension Tutorial Revit 2019/2020

- The following fields will need to be manually controlled and should be switched from “Blank” in the “Update only Blank Parameters” column to be set to “Skip” in the “Skip parameters” columns:
 - Facility – Name
 - Floor – Name
 - Type – ModelNumber
- The following field will need to be manually controlled and should be switched from “Blank” in the “Update only Blank Parameters” column to be set to “All” in the “Update All Parameters” column:
 - Type – Name
- Make sure the “Ungroup and set parameters” is checked.
- Click “Apply and Close”

Update
Batch update values in the COBie fields configured in Setup and shown below

COBie sheet	Field	Update blank parameters	Update all parameters	Skip parameters
All	CreatedBy	Blank	All	Skip
All	CreatedOn	Blank	All	Skip
Facility	Name	Blank	All	Skip
Facility	ProjectName	Blank	All	Skip
Floor	Elevation	Blank	All	Skip
Floor	Name	Blank	All	Skip
Space	Name	Blank	All	Skip
Space	GrossArea	Blank	All	Skip
Space	NetArea	Blank	All	Skip
Type	Name	Blank	All	Skip
Type	Category	Blank	All	Skip
Type	Description	Blank	All	Skip
Type	Manufacturer	Blank	All	Skip
Type	ModelNumber	Blank	All	Skip
Type	ReplacementCost	Blank	All	Skip
Component	Name	Blank	All	Skip
Component	Space	Blank	All	Skip
System	Name	Blank	All	Skip

Created by: cmealy@messer.cor

Options

- Apply only to elements marked for COBie export
- Set all blank values to n/a

Groups

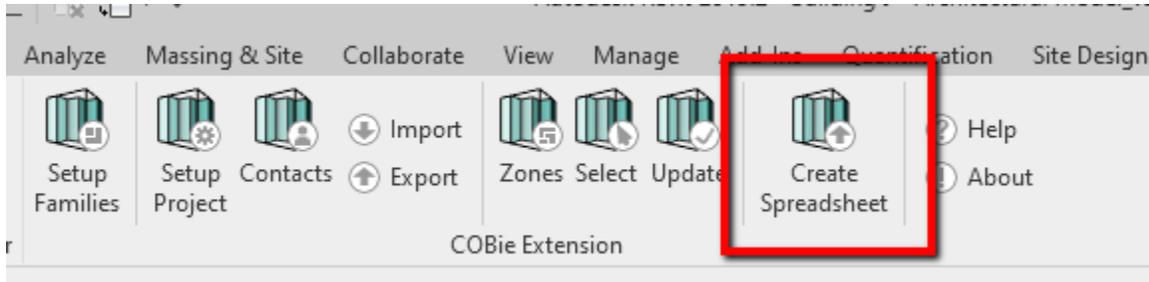
- Skip grouped elements
- Ungroup and set parameters

Buttons: Set Blank for all, Set All for all, Set Skip for all, Cancel, Apply and Close

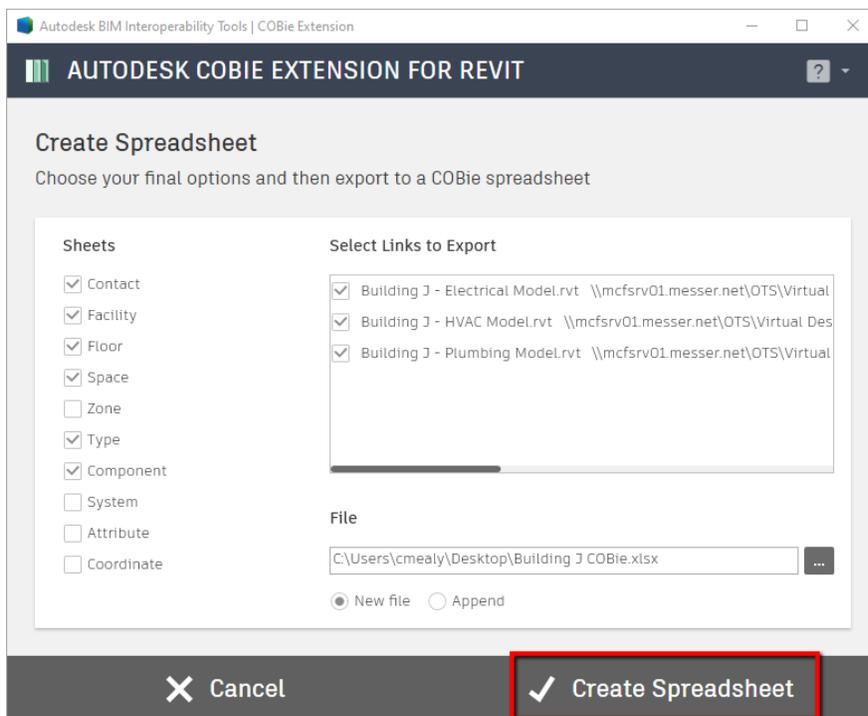
- Select Finish in the “COBie Extension Modify” dialog box.
- The steps above need to be completed in each individual model.

Complete Only in Overall File

- Once the above is completed for all models, you can then go to the overall file where all models are linked to export all of the data at once.
- Go to the “Create Spreadsheet” button



- Make sure each link to be exported is checked in the “Export Links” section and the following items have been unchecked in the “Select Worksheets” section:
 - Zone
 - System
 - Attribute
 - Coordinate



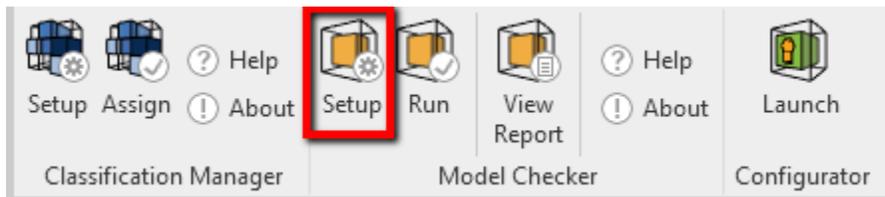
- Set your “Export to a File” location and select “Create Spreadsheet”.

OSU COBie Extension Tutorial Revit 2019/2020

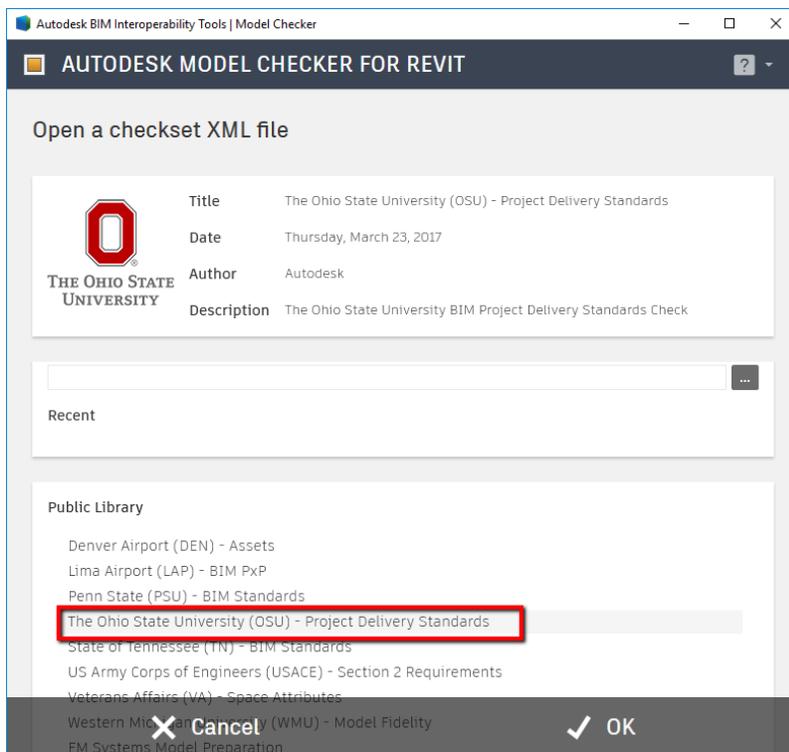
- Again, it will be expected that some exported data will need to be deleted from the spreadsheet before providing to OSU to be in compliance with the LOD Matrix of BIM Deliverables, including Door Location Clean Up.

Before Submitting the File to OSU complete the following steps

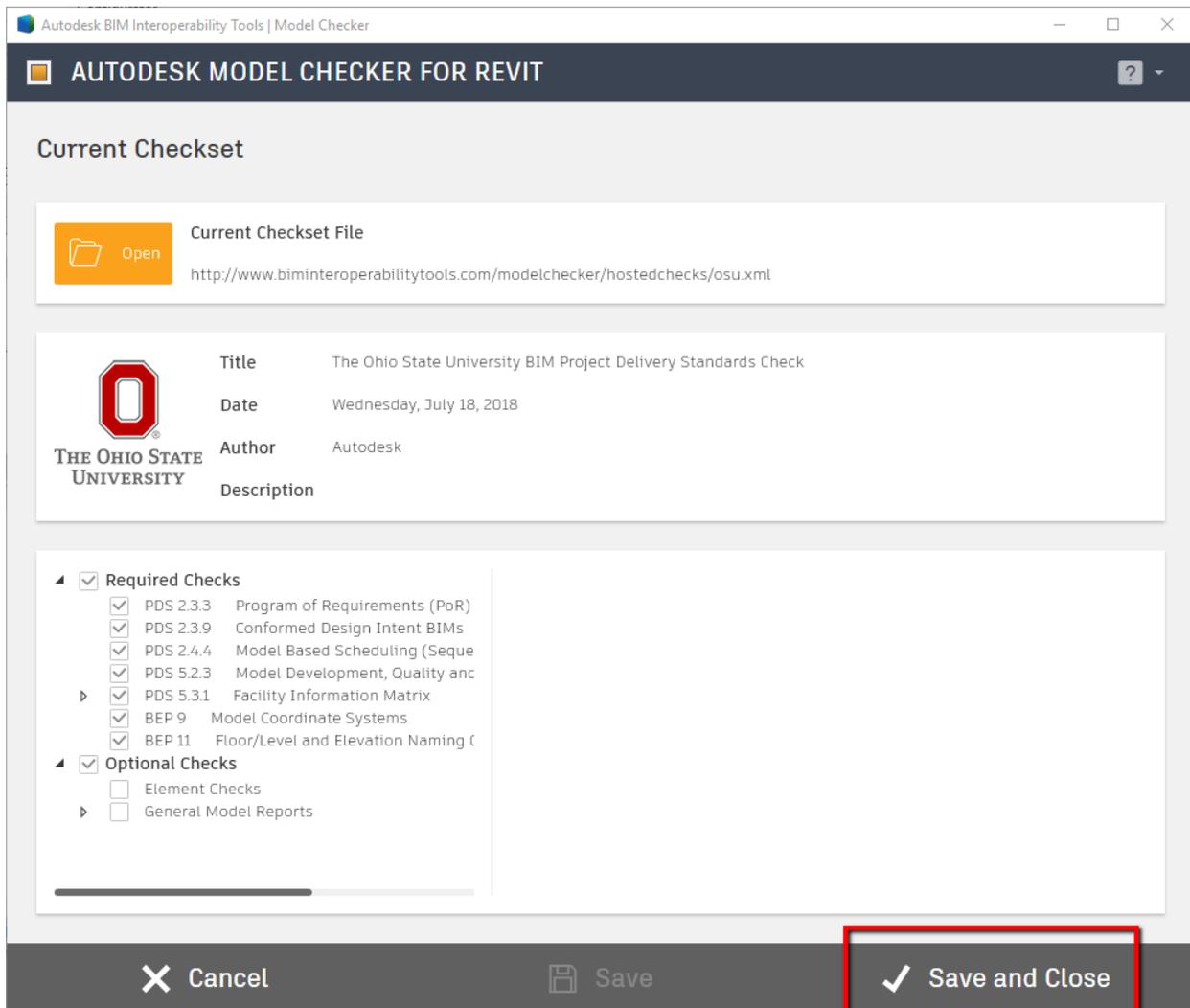
- From the BIM Interoperability Tools tab Revit you will now see the COBie Extension tools as seen below



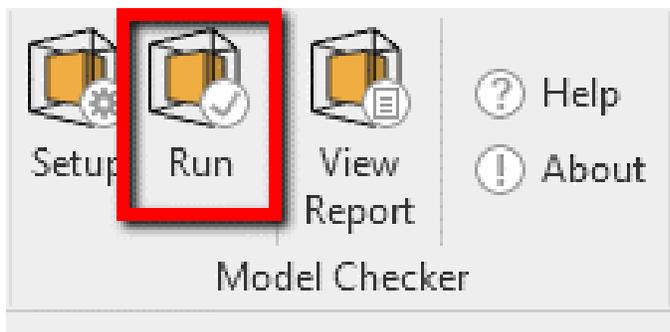
- Select the Setup button in the Model Checker
- Choose “The Ohio State University (OSU) – Project Delivery Standards” from the Public Library section and hit “OK”



- Click Save and Close

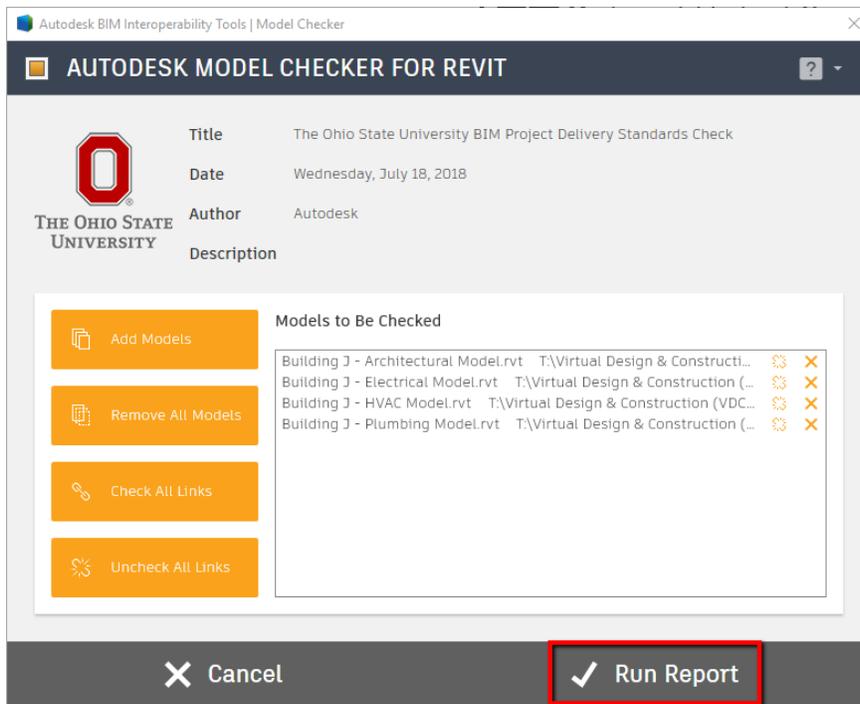


- Click the “Run” button in the Model Checker section

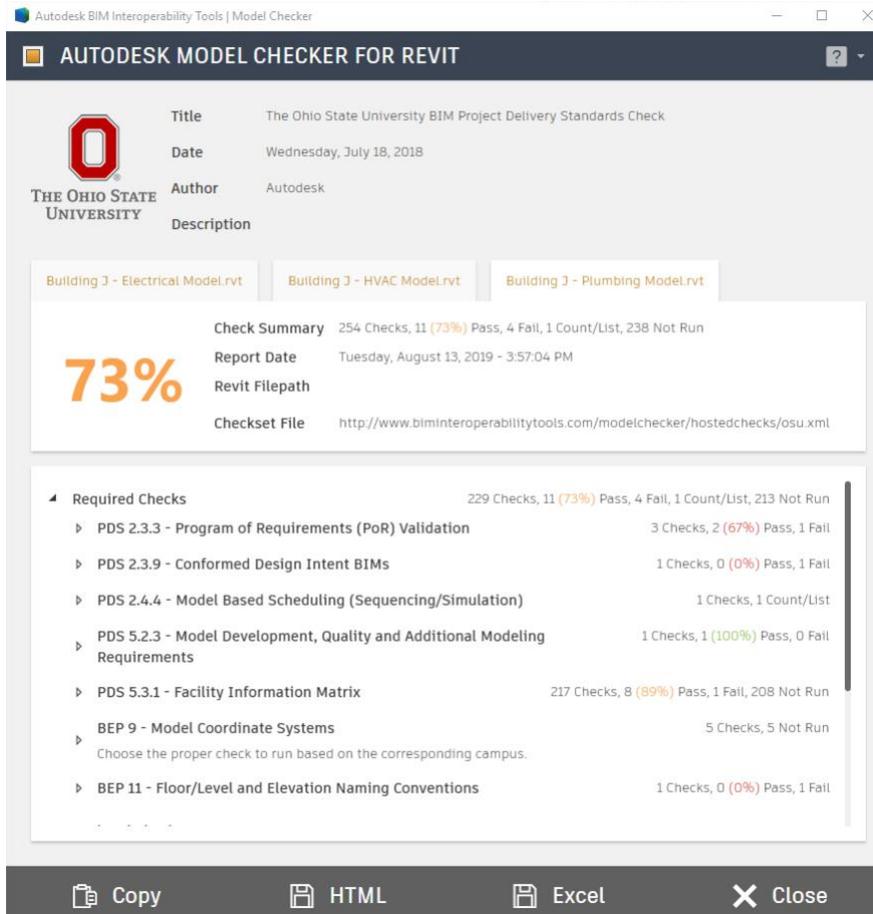


- Select all models to be checked, add models as necessary and check or uncheck the links to run the report against the models

OSU COBie Extension Tutorial Revit 2019/2020



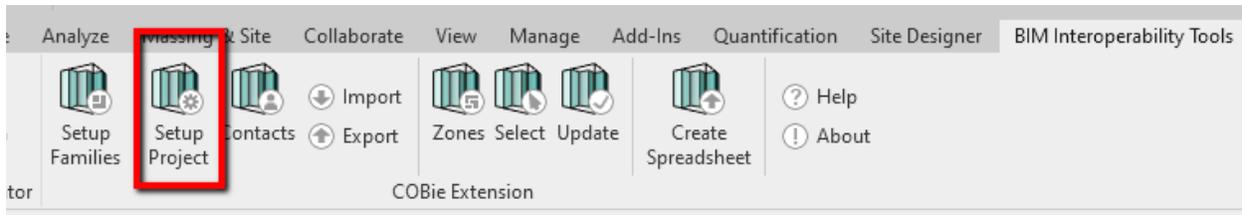
- Click Run Report, review findings and fix what is necessary before submission to OSU



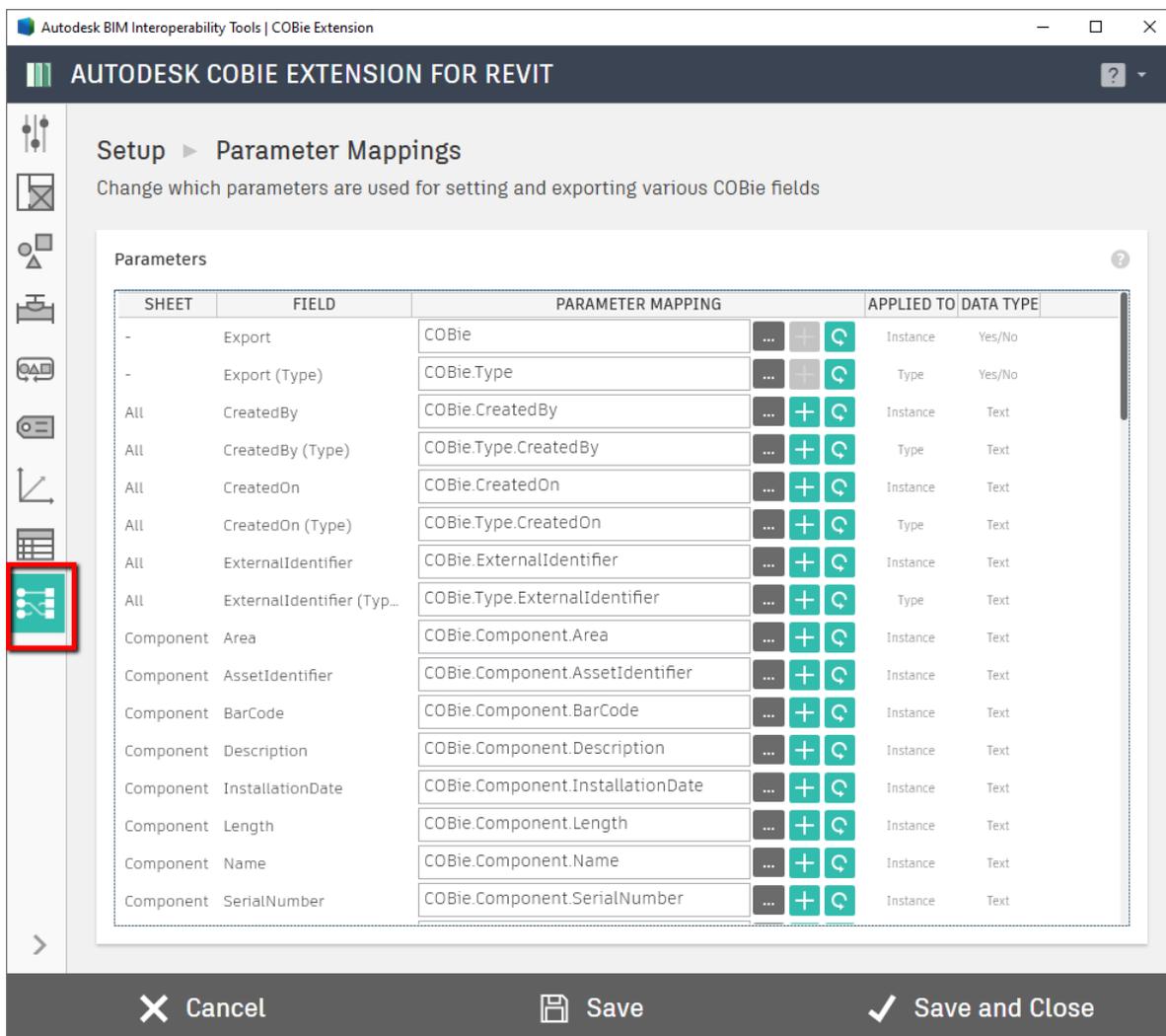
Appendix 1

If parameters are not showing up in the exported COBie sheet, you will need to “Modify Parameter Mappings For This Project” in the setup tab of the COBie Extension toolkit.

- Select the “Project Setup” button from the ribbon.

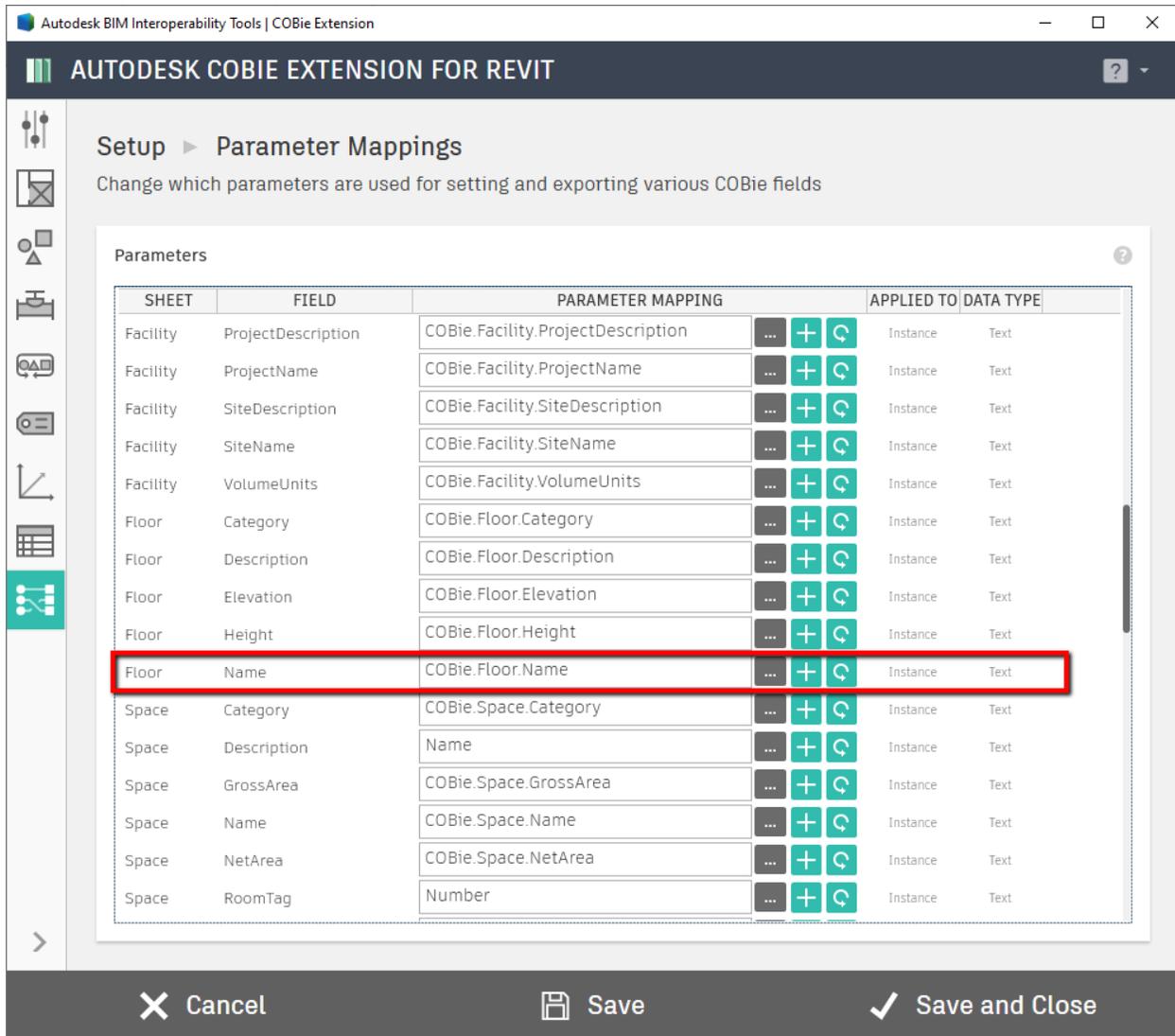


- Select “Parameter Mappings” tab

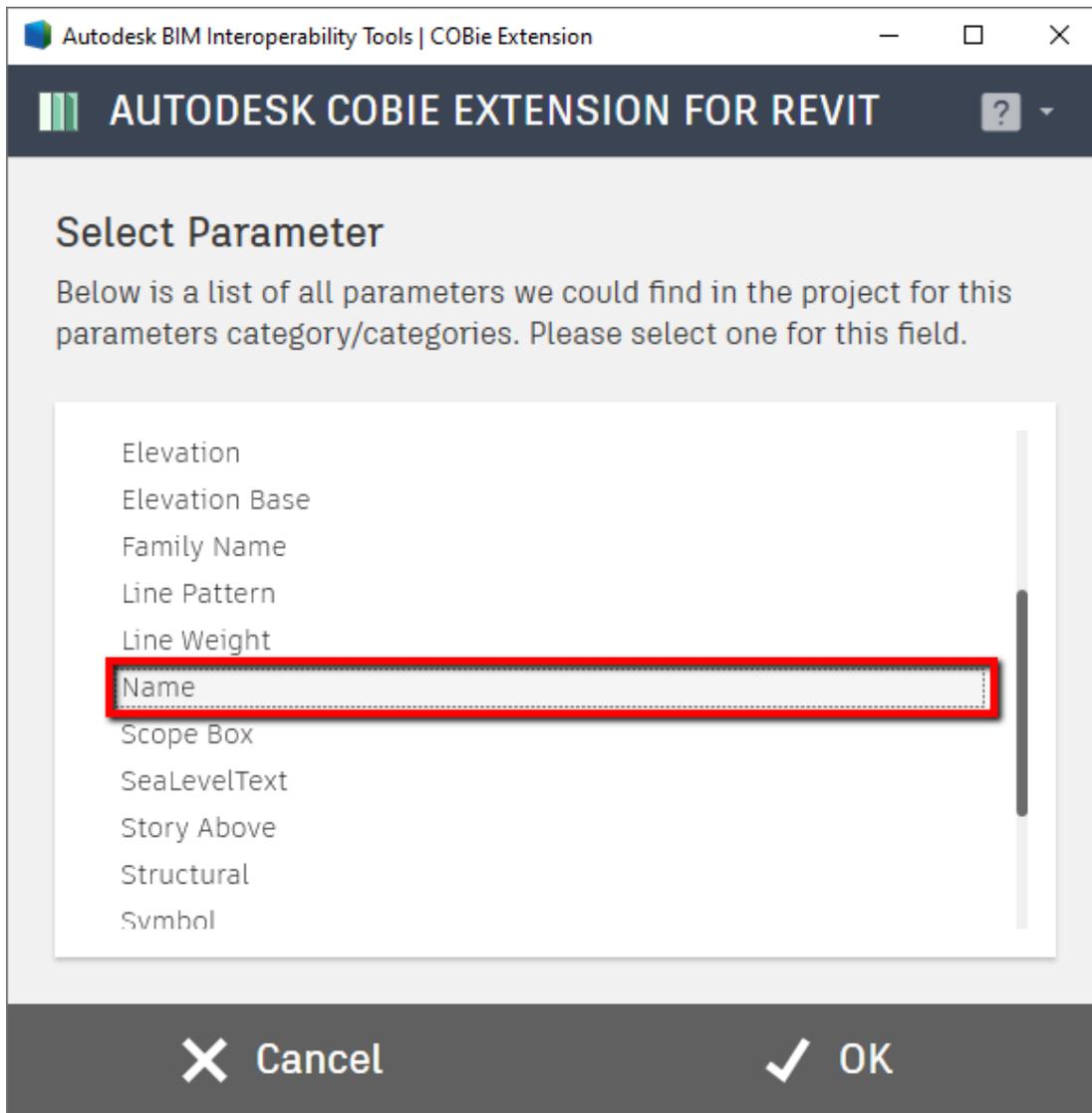


OSU COBie Extension Tutorial Revit 2019/2020

- Find the Type or Instance Parameters that are missing and change the Parameter Mapping to the Parameter that works with the Type or Instance.



- For example, if the Floor Name is not populating find the Instance Parameter for Floor Name and click the three dots at the end of the COBie.Floor.name map
- In the Select Parameter dialog box that just opened, choose the appropriate parameter (in this case it will be "Name") the select "Ok".



- You Parameter map should now show the update accordingly and pull in the correct data to your COBie sheet.
- Repeat for any other Type or Instance Parameters that are problematic (different Type and Instance Parameters will have different Parameters to select when changing, you will need to validate that the parameter you choose is pulling the correct information into the COBie sheet).
- Click the “Save and Close” button
- If you are having issues with the Modify Parameter Mappings, please visit <https://youtu.be/EZzLTSR3ix0> for more information and further instructions.