



eTlipse
elements2



TL PARTS GUIDE (ENGLISH)

April 14, 2024

TL ELEMENTS: PARTS - FINISHING OF COMPOUND OBJECTS \\ GUIDE

TL Elements PARTS is a tool for filtering and manual selection of parts by material; handling of ceilings, roofs and floors as dividing elements for wall parts; automatic replacement and merge of multiple parts; manual or automatic exclusion and offset to multiple parts faces. You can use the core functionalities of the TL Elements lists to handle elements selection and visualization. The standard TL Elements integrated visualization tools are also available to improve this workflow.

This is a guide to get you started on the basics of the command. Please, keep in mind that, in addition to this and any other support material, TL Elements also provides helpful tooltips with descriptions of features that you may invoke by hovering your mouse over the buttons of the application.

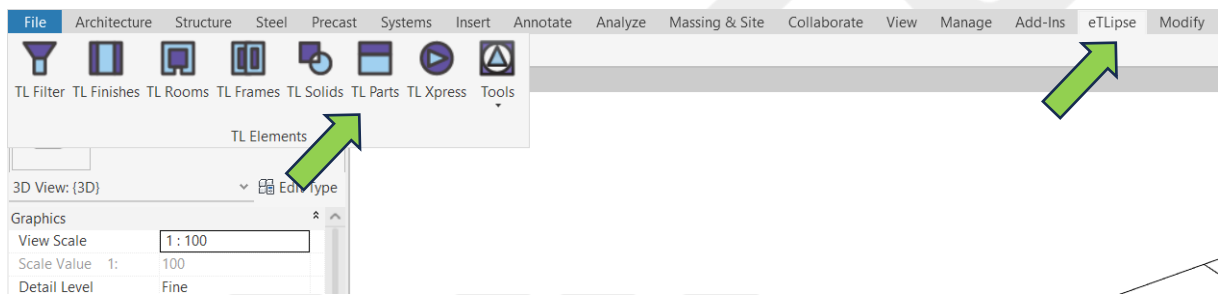
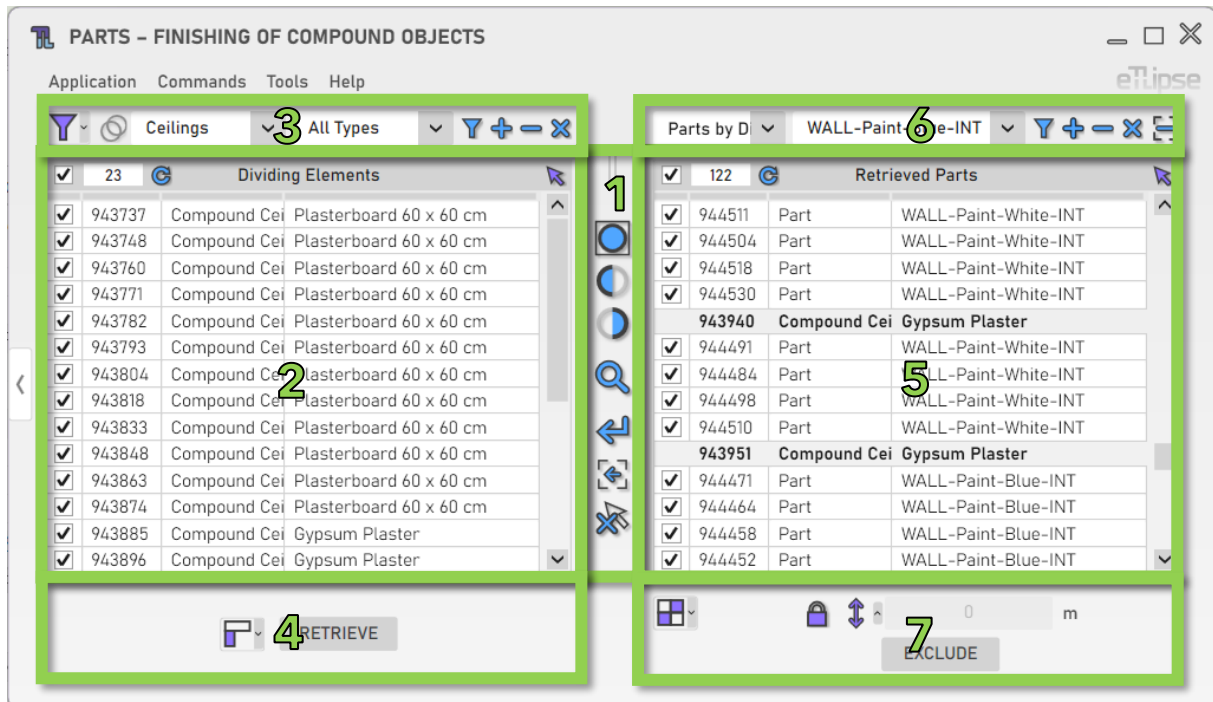


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TL PARTS INTERFACE



As we can see in the image, the TL Parts user interface provides:

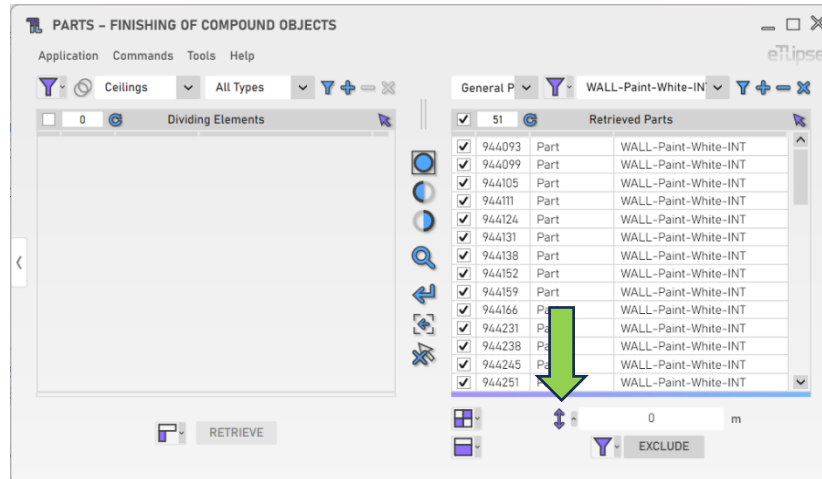
1. A set of visualization tools.
2. A list of elements of the Ceilings/Floors/Roofs category (Dividing Elements Retrieval List).
3. A set of tools for ceilings/floors/roofs filtering (to fill the Dividing Elements Retrieval List).
4. A set of tools for operations with the elements checked in the Dividing Elements Retrieval List.
5. A list of elements of the Parts/Walls categories (Parts Retrieval List).
6. A set of tools for parts/walls filtering (to fill the Parts Retrieval List).
7. A set of tools for operations with the parts/walls checked in the Walls Retrieval List.

To learn how to use the controls in lists and the visualization tools, please, refer to the “TL List” and “TL Visualization Tools” guides.

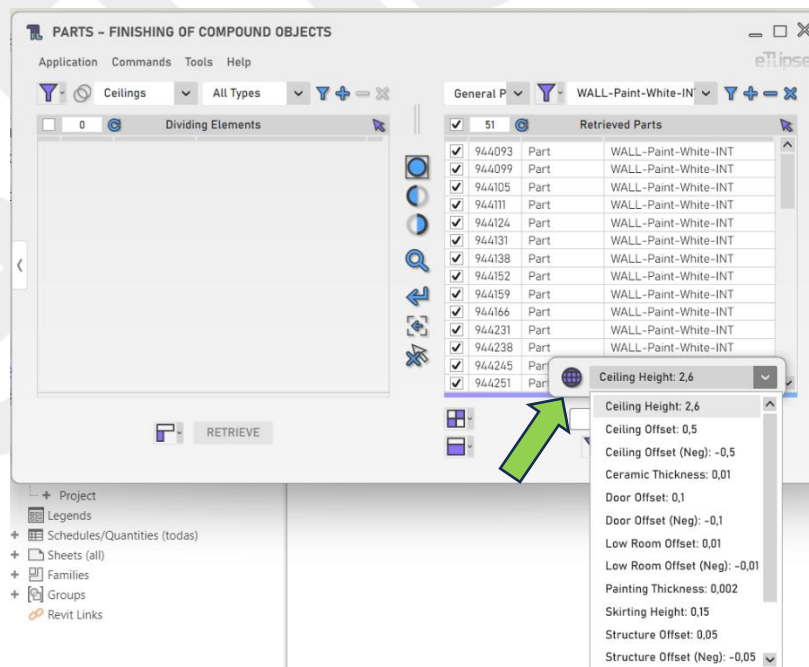
All numeric text boxes in the interface will assume values in the unit currently set for length in the active project (for the examples in this guide, it will be meter) and also can parse simple formulas of multiplication, division, subtraction and addition in this unit.

USE OF REVIT GLOBAL PARAMETERS

Before using any of the multiple features of TL Parts, we should note that every field for numeric value in its user interface can be locked and receive values from Revit global parameters. We must keep in mind that the global parameter must always match the unit type of the numeric field (fields for length values require length global parameters, fields for integer values require integer global parameter, etc.).



Every field is preceded by a button that opens the panel with the option to lock the values in the field to a Revit global parameter. In the image, we can see an example of this button next to a field that takes values for elevations of walls (in this case, values of length).



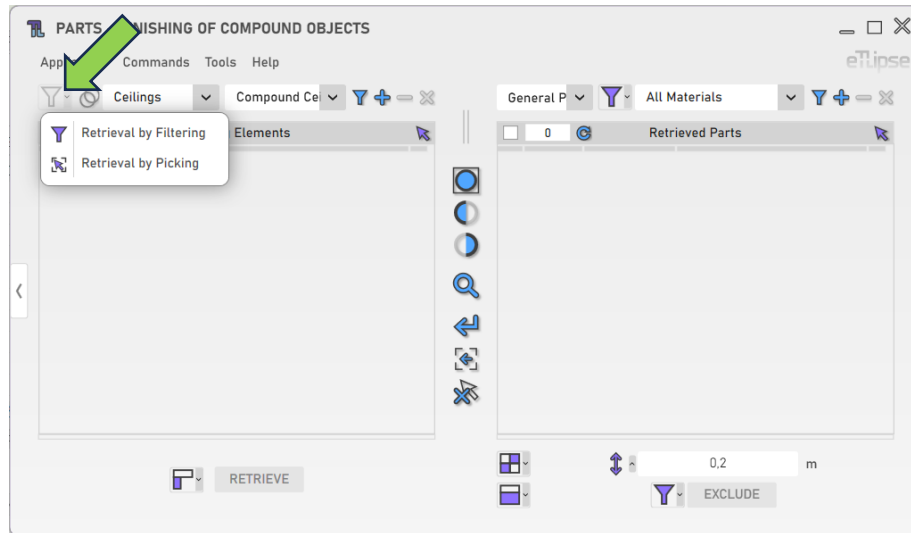
After clicking the button, we can click the "globe" icon to lock the field to one of the available global parameters of the respective unit type found in the active Revit project.

If no global parameter for the unit type of the field is found, the button to open the panel will be disabled.

DIVIDING ELEMENTS RETRIEVAL

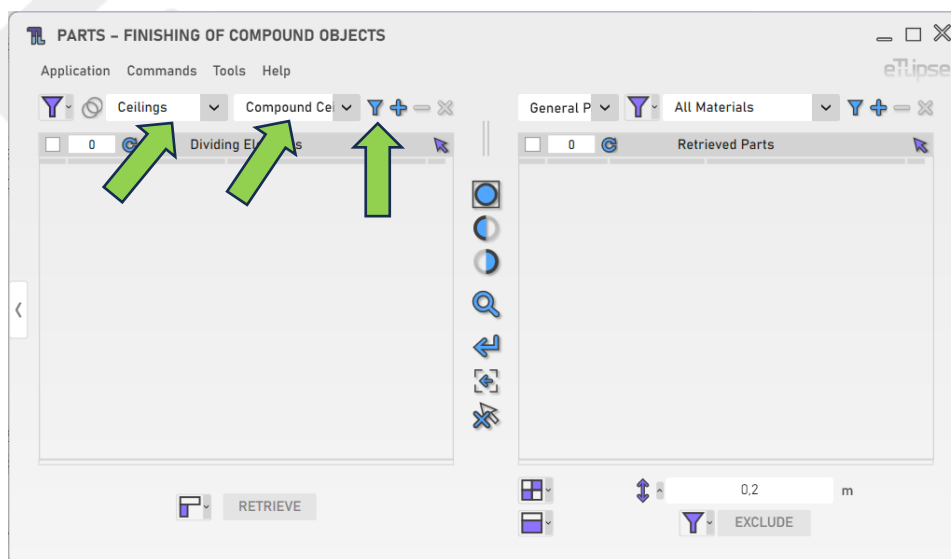
Retrieval Mode

You can retrieve elements in two ways: by filtering them by type ("Filtering") or by picking the ones you wish in the Revit active view ("Picking"). You can set the retrieval mode in the "Toggle Retrieval Mode" dropdown box.



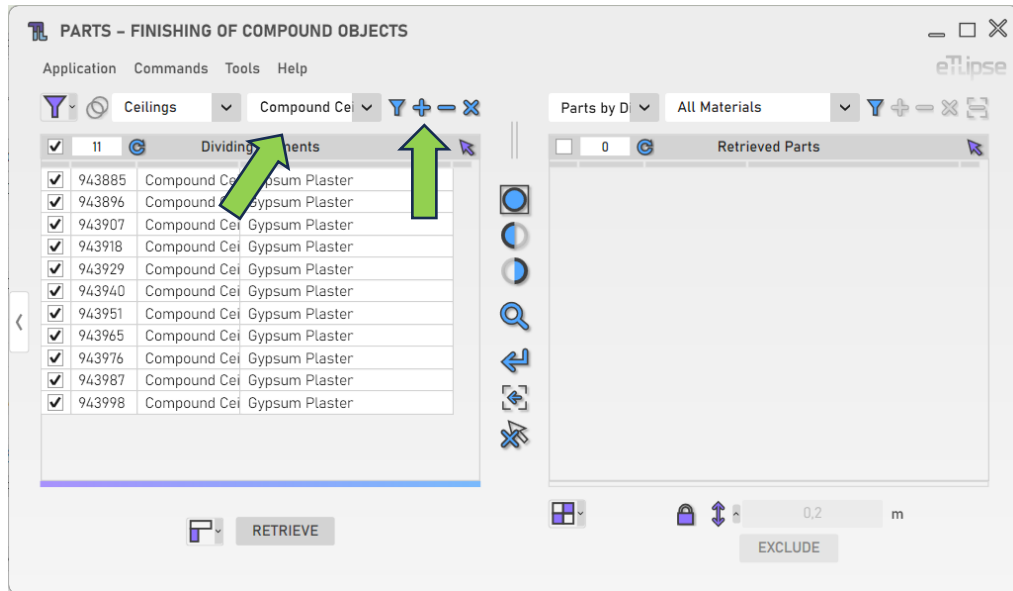
Retrieving Dividing Elements by Category and Type

Dividing elements are elements that can be used as horizontal references to perform offsets and divisions of walls and wall parts. In order to retrieve them, it is necessary to choose a category (Ceilings, Floors or Roofs) in the "Dividing Categories" dropdown box and a respective type in the "Dividing Elements Type" dropdown box. Then you must click the "Retrieve Dividing Elements" button. In Manual mode, you'll have to pick the elements of the chosen type in the Revit active view. Keep in mind that, if there are elements already selected in the Revit view, these elements are going to be listed, instead.



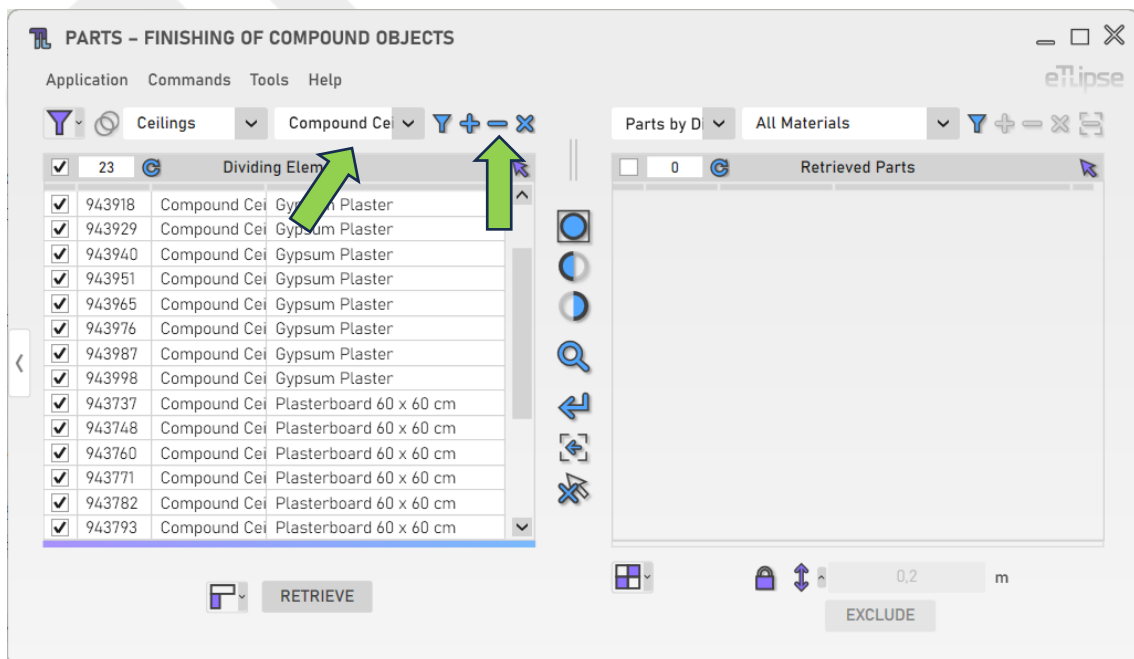
Adding Dividing Elements by Type

Keeping the same category selected, in order to add dividing elements of a specific type to the list, you must choose a type in the “Dividing Elements Type” dropdown box and click the “Add Dividing Elements” button. In Manual mode, you’ll have to pick the elements of the chosen type you want to add in the Revit active view.



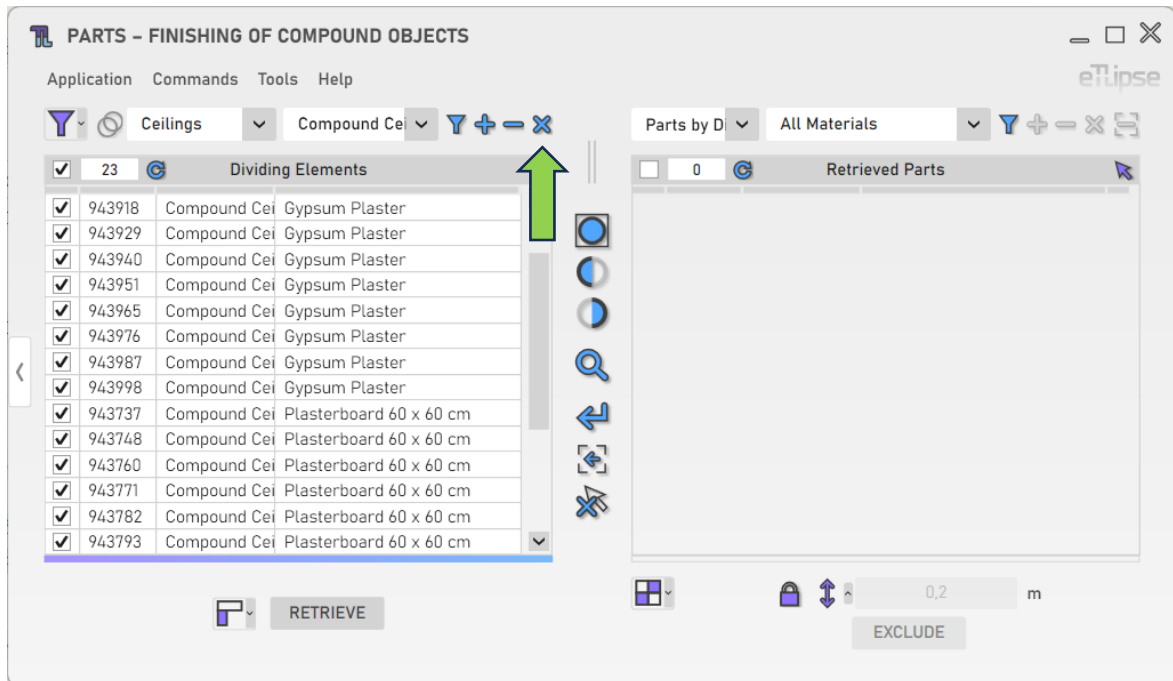
Removing Dividing Elements by Type

In order to remove dividing elements of a specific type from the list, you must choose a type in the “Dividing Elements Type” dropdown box and click the “Remove Dividing Elements” button. In Manual mode, you’ll have to pick the elements of the chosen type you want to remove in the Revit active view.



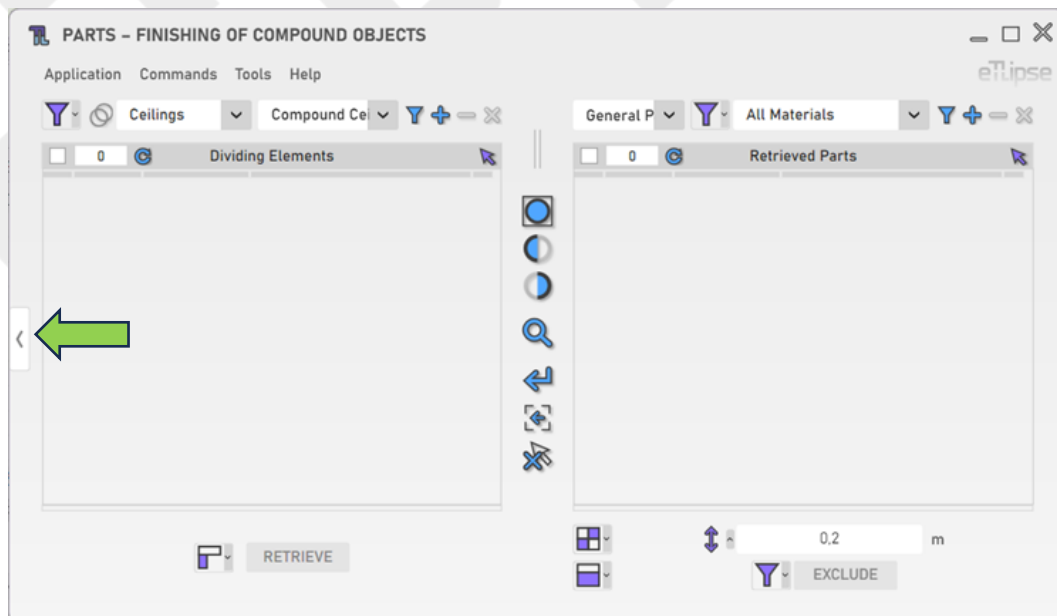
Clearing the Dividing Elements List

In order to clear the list, you must click the “Clear Retrieved Dividing Elements” button.



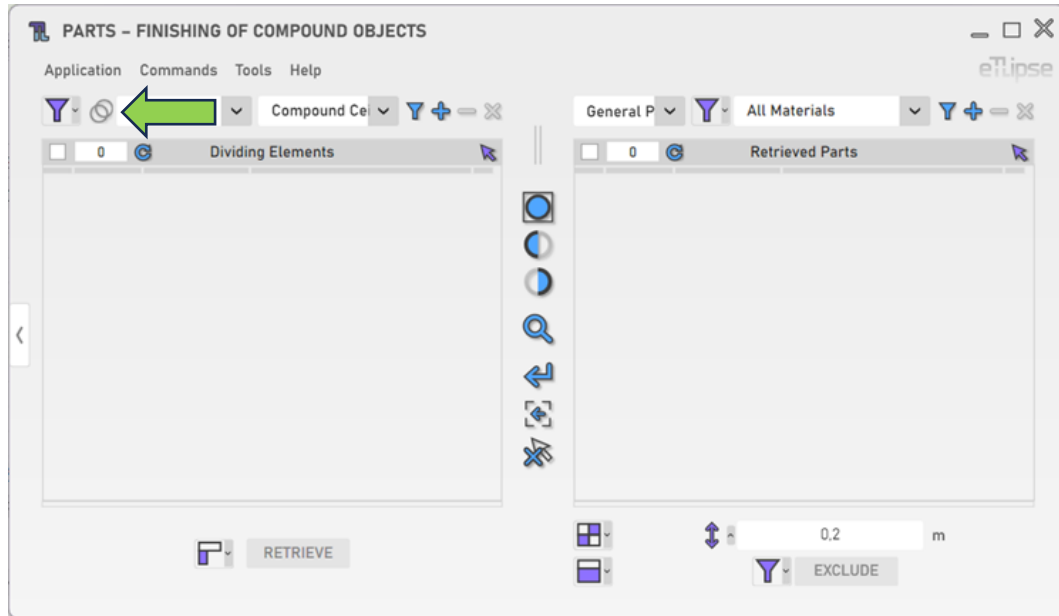
Using TL Filter to fill the Dividing Elements List

At any time, you can click the “Slide to TL Filter” arrow button to bring elements retrieved in TL Filter to the Dividing Elements Retrieval List.



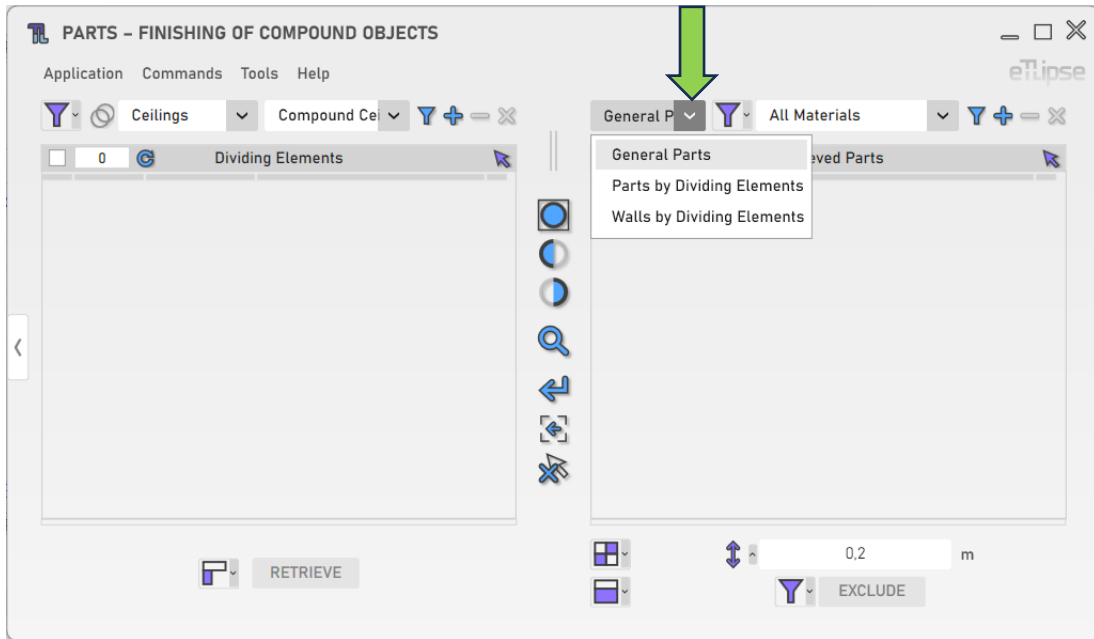
Retrieval of Dividing Elements from Linked Models

You can click the “Toggle Allow Linked Models” to enable the possibility to list dividing elements from linked projects in the Dividing Elements Retrieval List.



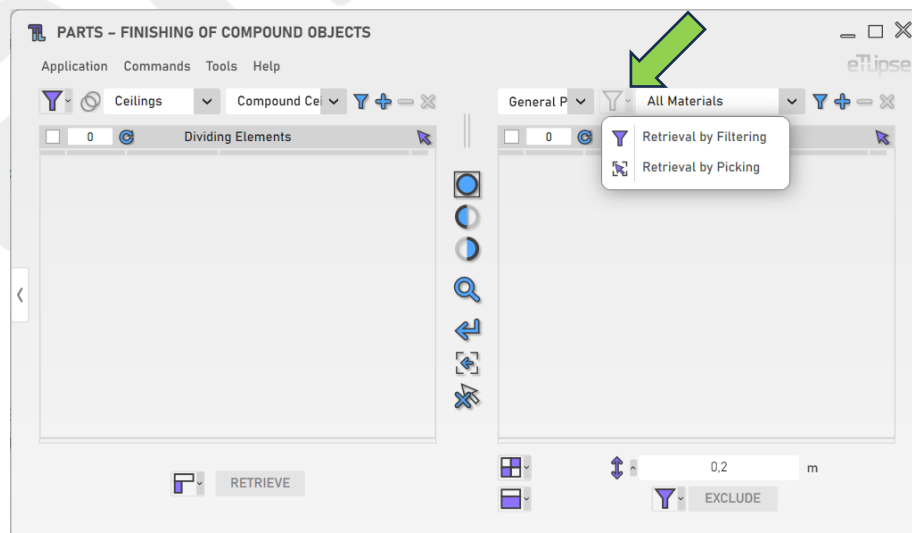
PARTS RETRIEVAL: GENERAL PARTS

It is possible to list elements of the Parts category to perform operations of division, exclusion, replacement, offset and merge. To enable this specific retrieval mode, you must select the "General Parts" mode at the "Parts General Operation Modes" dropdown box.



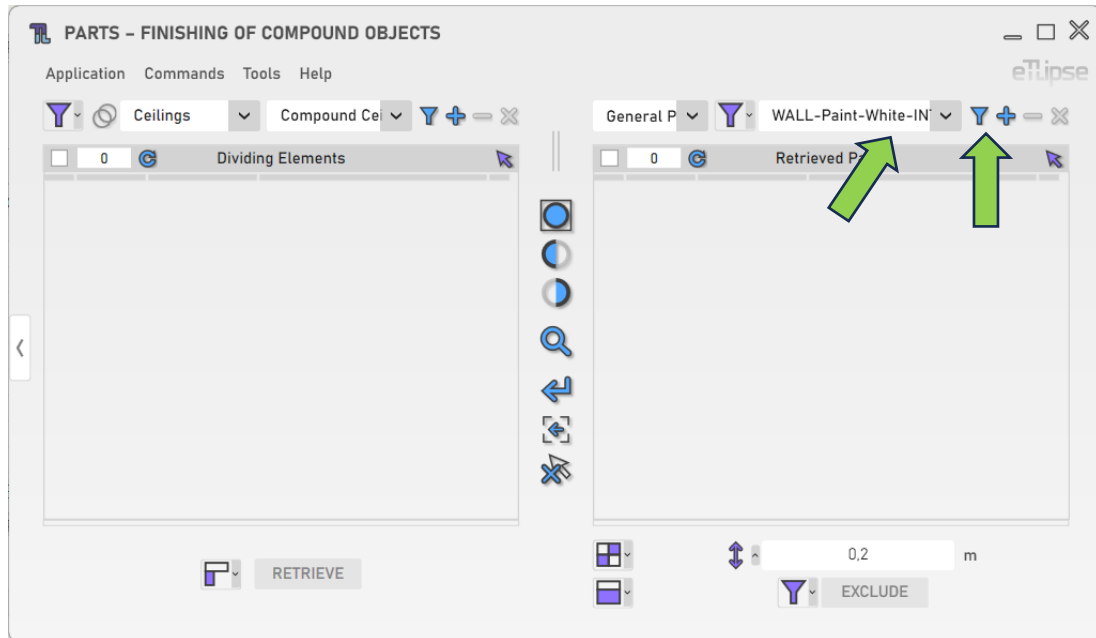
Retrieval Mode

You can retrieve parts in two ways: by filtering them by material ("Filtering") or by picking the ones you wish in the Revit active view ("Picking"). You can set the retrieval mode in the "Toggle Retrieval Mode" dropdown box.



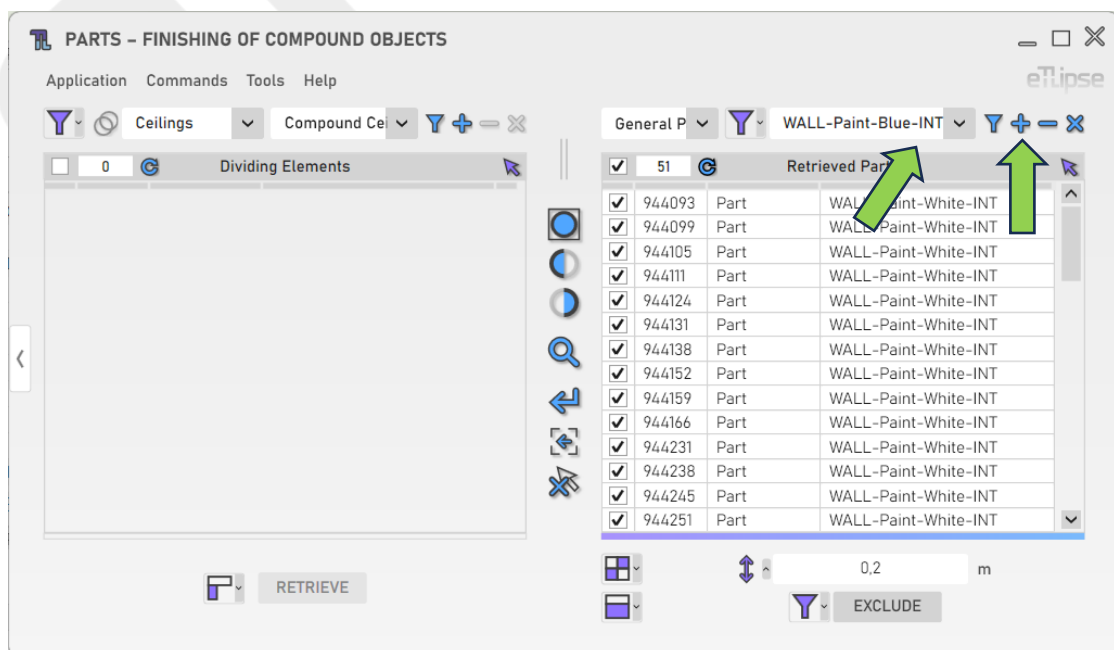
Retrieving Parts by Material

In order to retrieve and list parts of a specific material, you must choose a material in the “Parts Material” dropdown box and click the “Retrieve Parts” button. In Manual mode, you’ll have to pick the parts of the chosen material in the Revit active view. Keep in mind that, if there are parts already selected in the Revit view, these parts are going to be listed, instead.



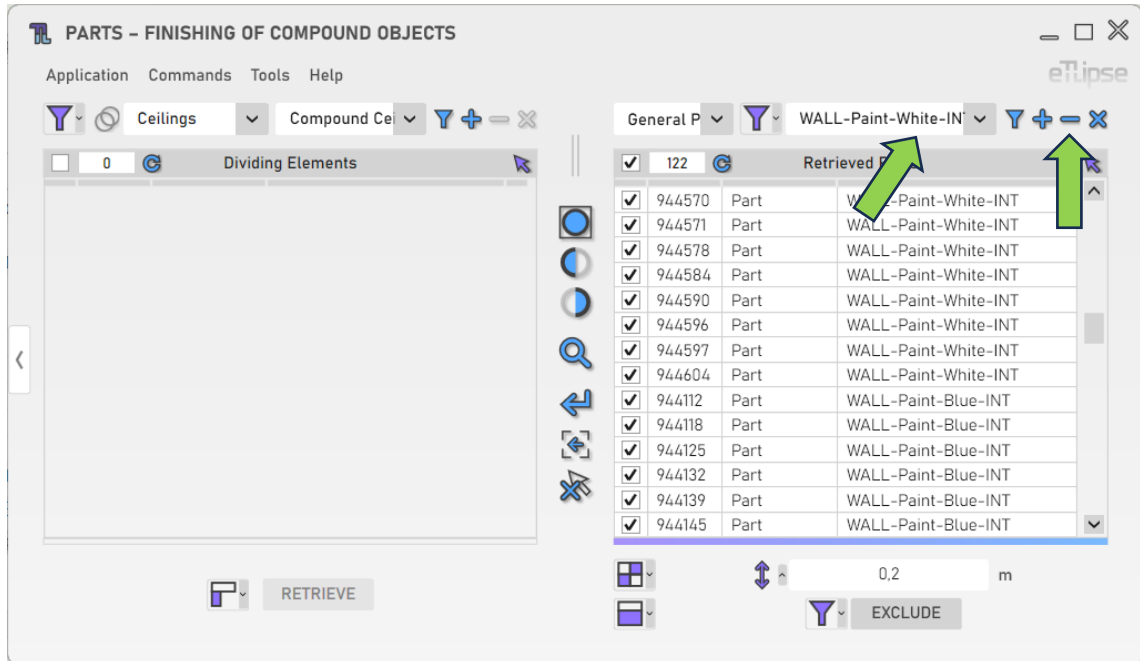
Adding Parts by Material

In order to add parts of a specific material to the list, you must choose a material in the “Parts Material” dropdown box and click the “Add Parts” button. In Manual mode, you’ll have to pick the parts of the chosen material you want to add in the Revit active view.



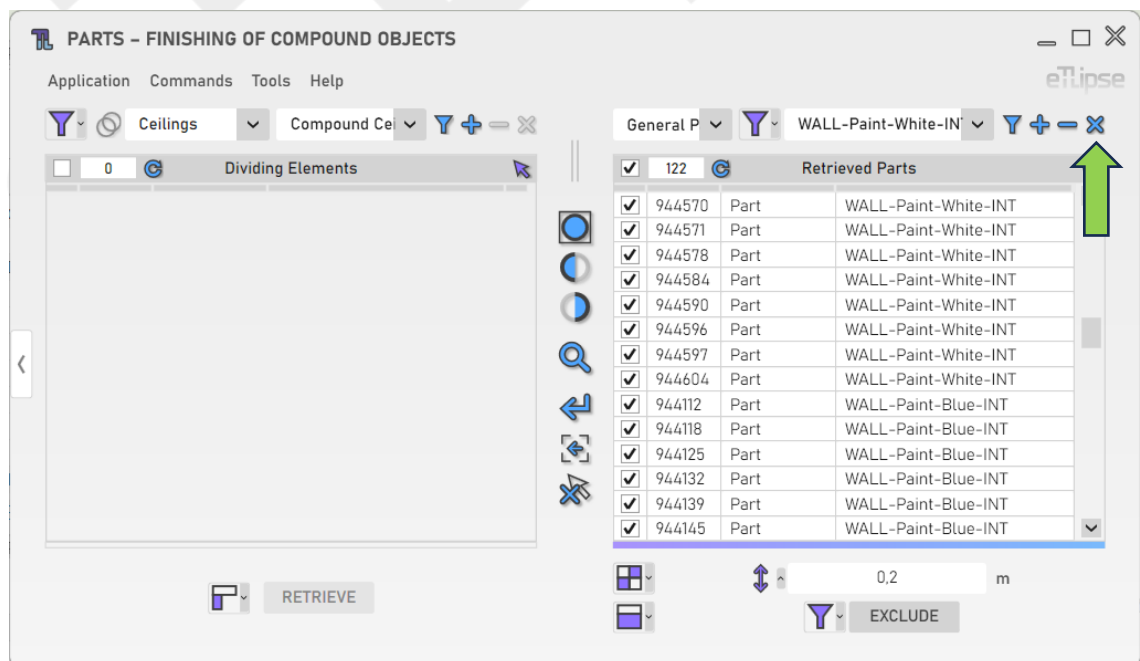
Removing Parts by Material

In order to remove parts of a specific material from the list, you must choose a material in the "Parts Material" dropdown box and click the "Remove Parts" button. In Manual mode, you'll have to pick the parts of the chosen material you want to remove in the Revit active view.



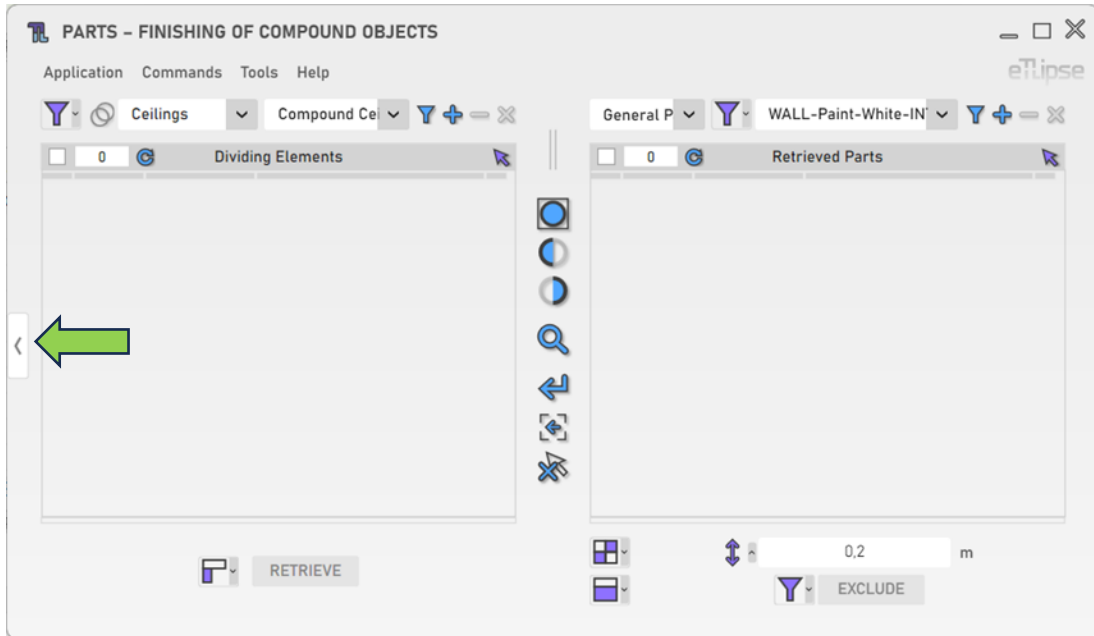
Clearing the Parts List

In order to clear the list, you must click the "Clear Retrieved Parts" button.



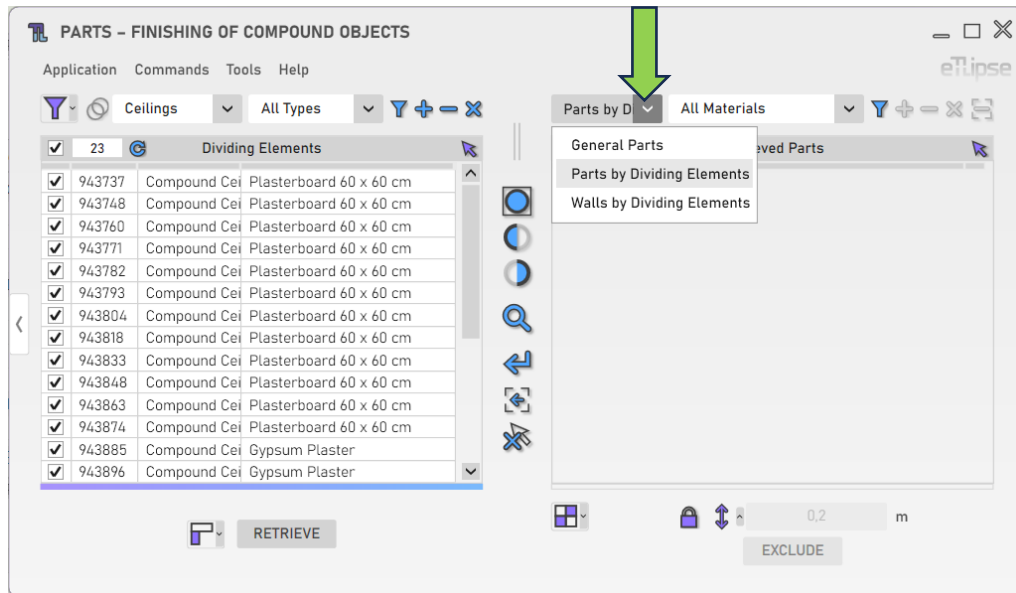
Using TL Filter to fill the Parts List

At any time, you can click the "Slide to TL Filter" arrow button to bring parts retrieved in TL Filter to the Parts Retrieval List.



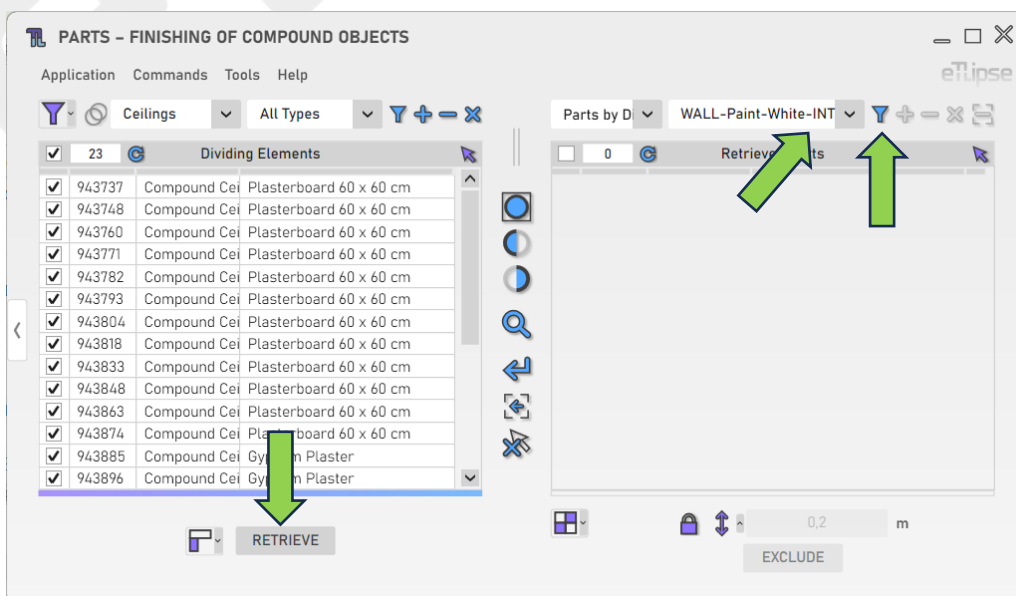
PARTS RETRIEVAL: PARTS BY DIVIDING ELEMENTS

If the elements checked in the Dividing Elements Retrieval List are surrounded by wall parts, you can list these parts and use them in operations of division, exclusion, replacement, offset and merge. To enable this specific retrieval mode, you need to have elements checked in the Dividing Elements Retrieval List and then, select the "Parts by Dividing Elements" mode at the "Parts General Operation Modes" dropdown box.



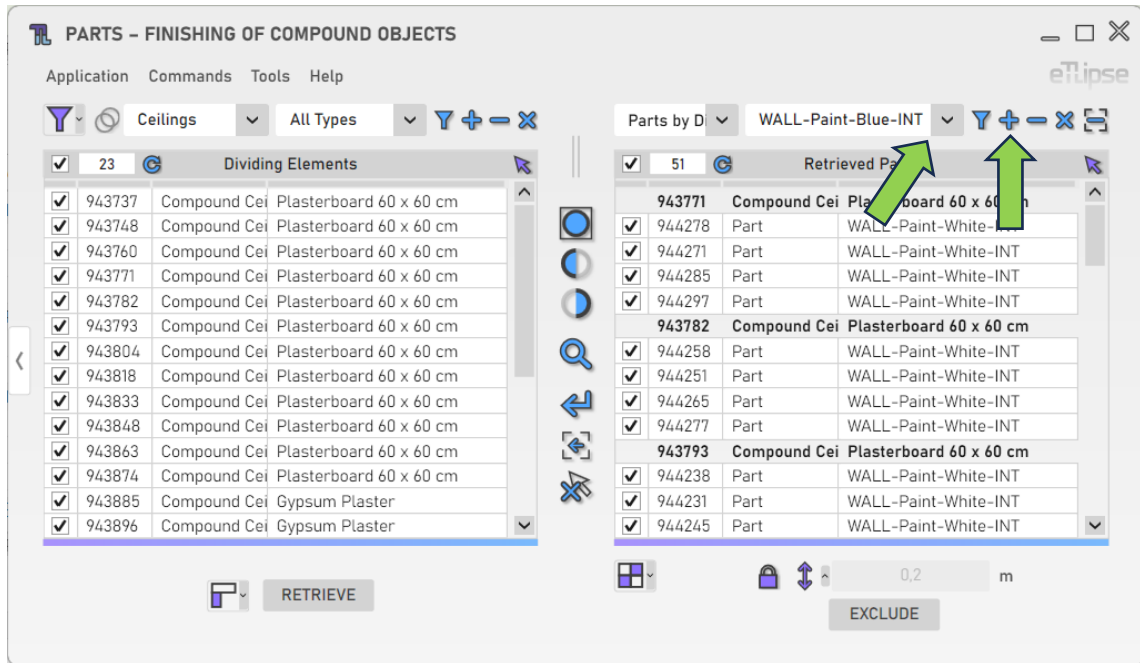
Retrieving Parts by Dividing Elements

With at least one element checked in the Dividing Elements Retrieval List and a material chosen at the "Parts Material" dropdown box, you can click one of the two instances of the "Retrieve Parts by Dividing Elements" button to list the checked dividing elements with their respective intersecting parts of the selected material in the Parts Retrieval List.



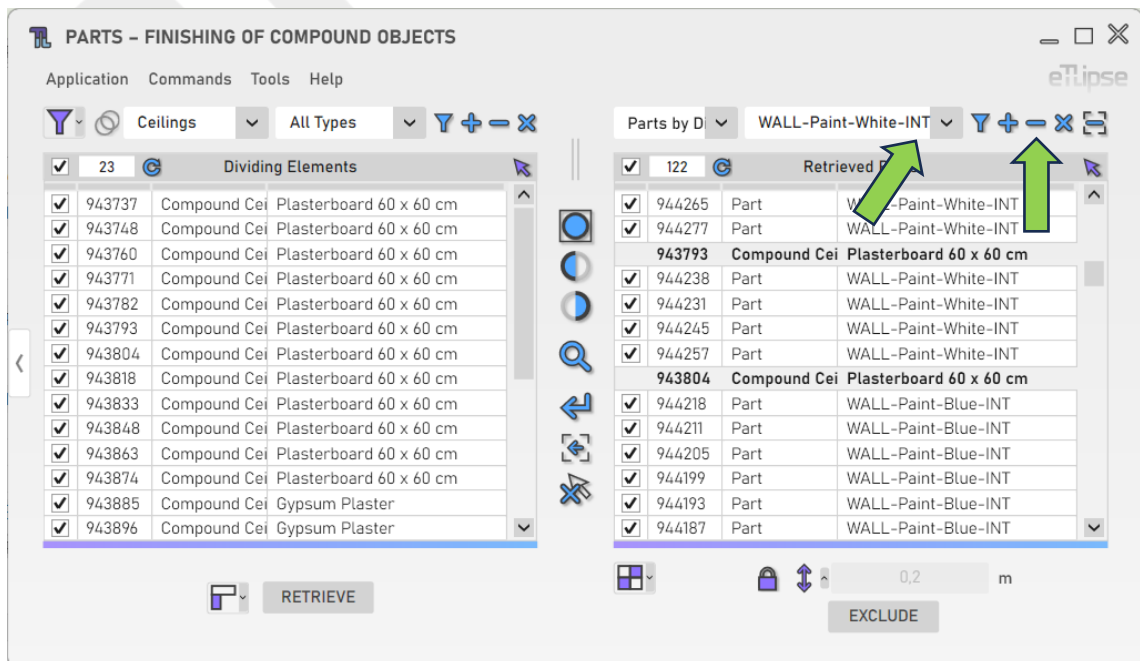
Adding Parts by Dividing Elements

With at least one element checked in the Dividing Elements Retrieval List and a material chosen at the "Parts Material" dropdown box, you can click the "Add Parts by Dividing Elements" button to add the checked dividing elements with their respective intersecting parts of the selected material to the Parts Retrieval List.



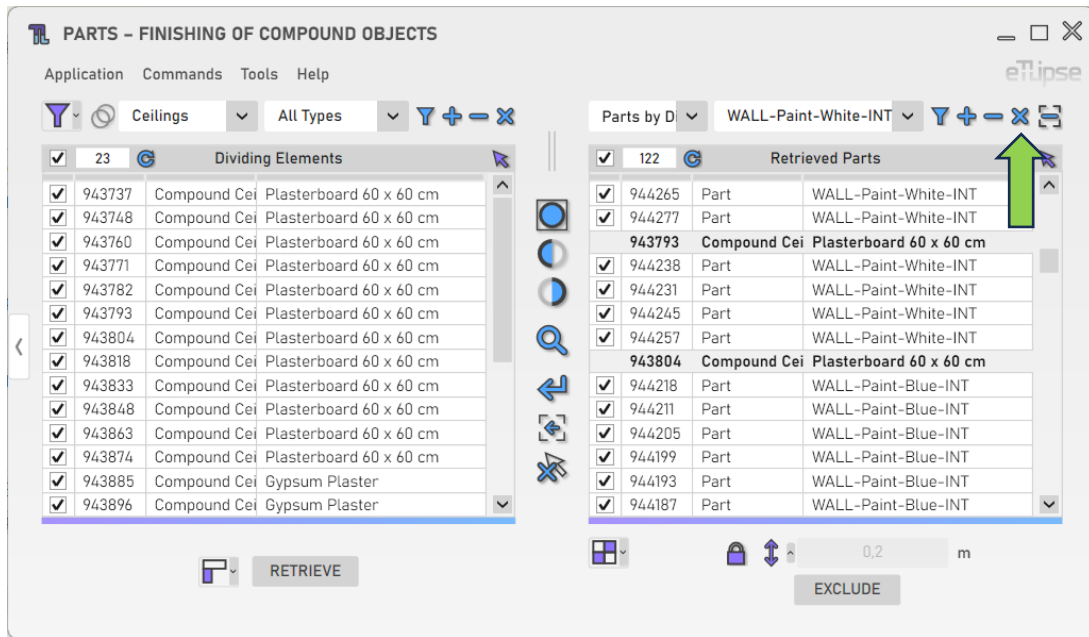
Removing Parts by Material

In order to remove parts of a specific material from the list, you must choose a material in the "Parts Material" dropdown box and click the "Remove Parts" button.



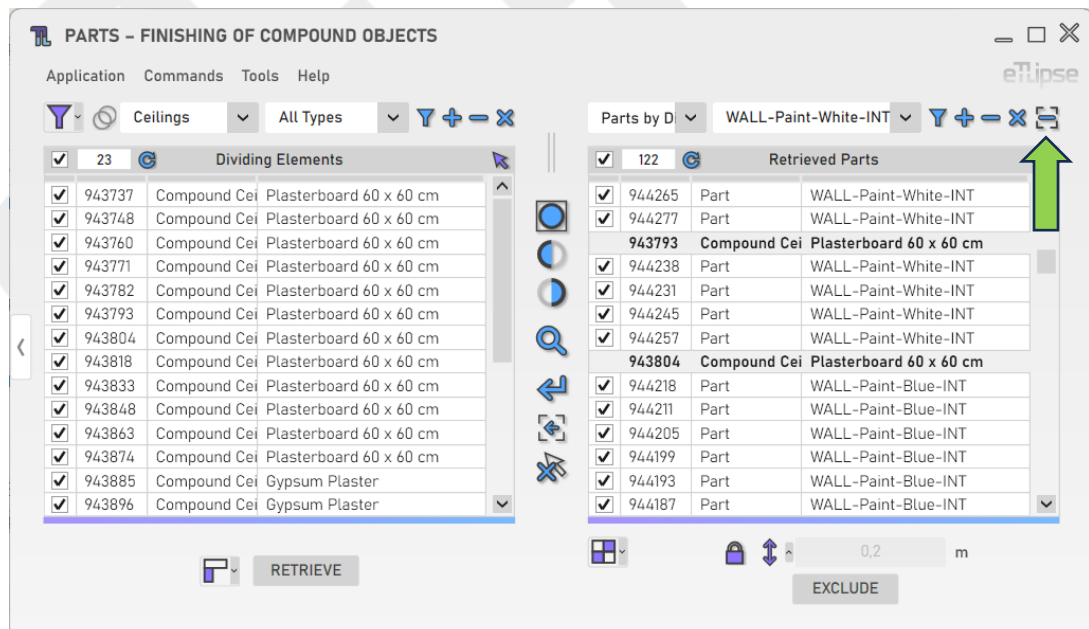
Clearing the listed Parts

In order to clear the list, you must click the “Clear Retrieved Parts” button.



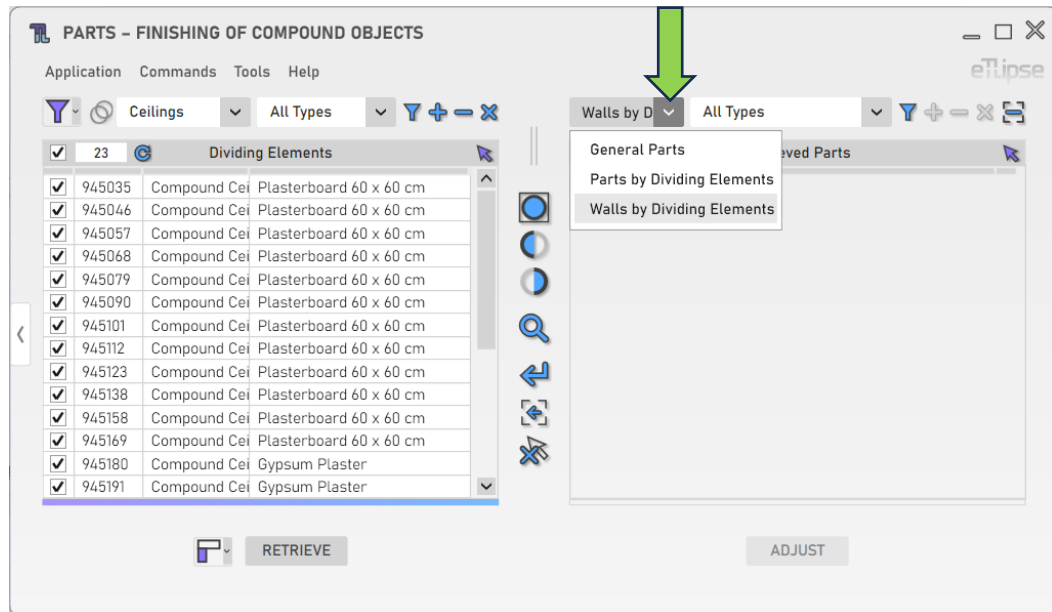
Removing Parts from the List by Picking

In order to manually pick parts in the Revit view and remove them from the list, you must click the “Remove Parts from List by Picking” button.



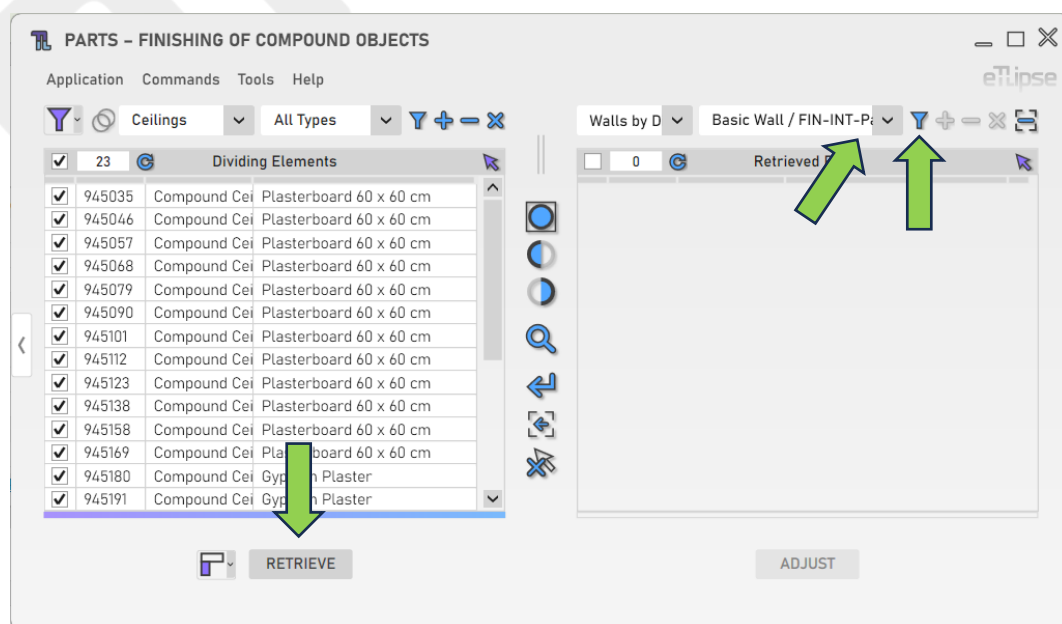
PARTS RETRIEVAL: WALLS BY DIVIDING ELEMENTS

If the elements checked in the Dividing Elements Retrieval List are surrounded by walls, you can list these walls and use them in an operation of height adjustment. To enable this specific retrieval mode, you need to have elements checked in the Dividing Elements Retrieval List and then, select the “Walls by Dividing Elements” mode at the “Parts General Operation Modes” dropdown box.



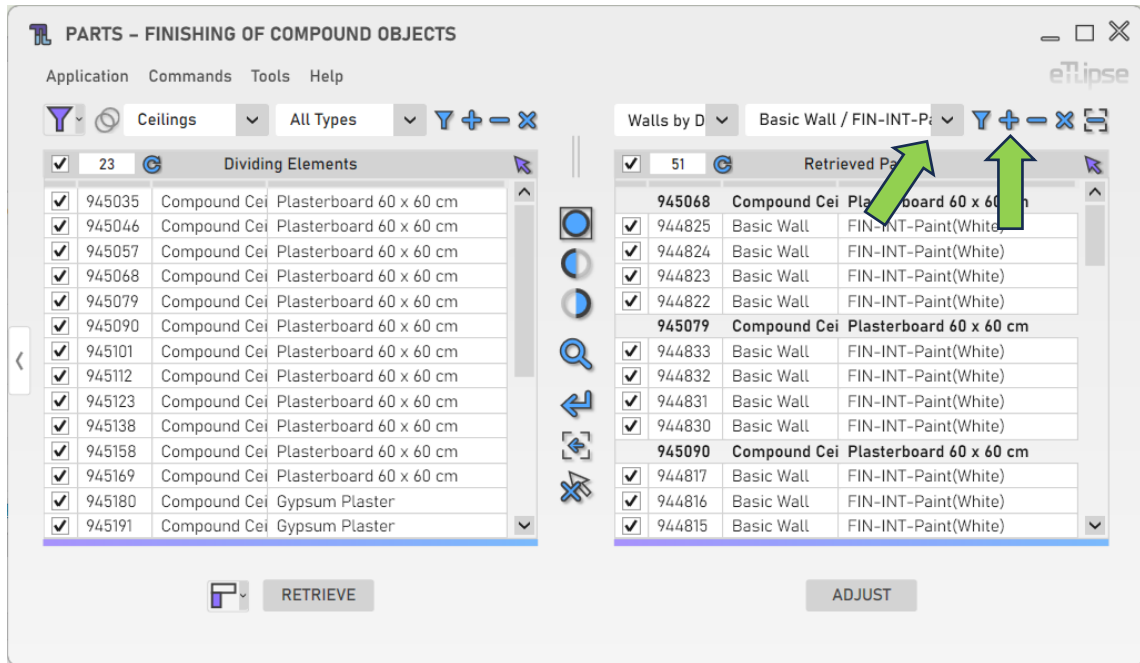
Retrieving Walls by Dividing Elements

With at least one element checked in the Dividing Elements Retrieval List and a wall type chosen at the “Wall Types” dropdown box, you can click one of the two instances of the “Retrieve Walls by Dividing Elements” button to list the checked dividing elements with their respective intersecting walls of the selected type in the Parts Retrieval List.



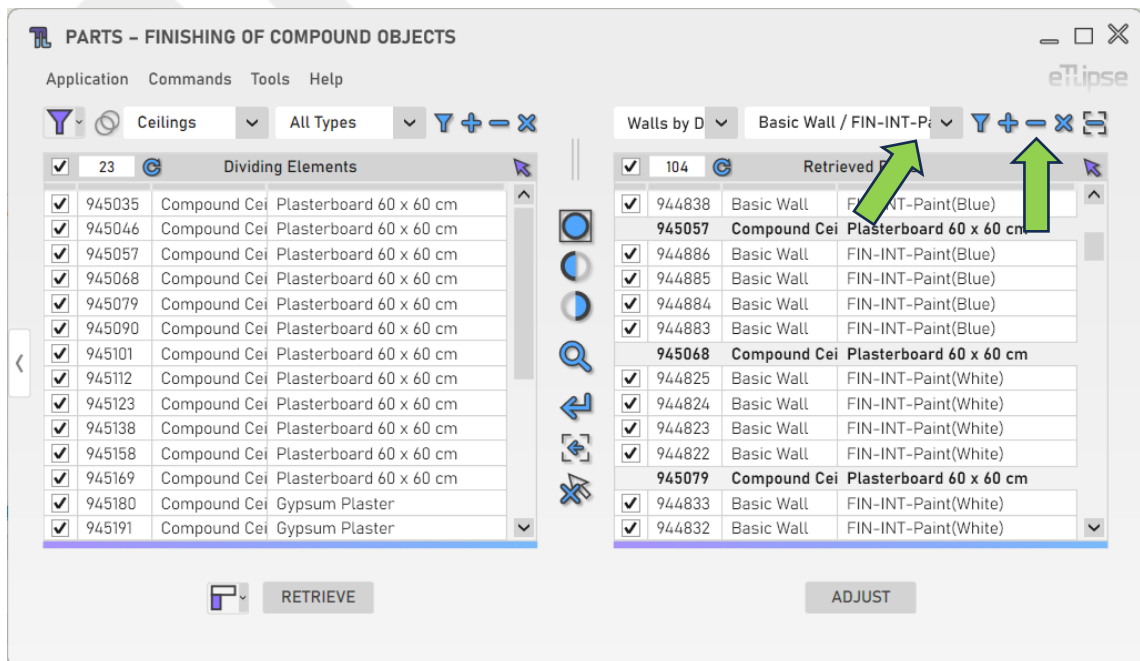
Adding Walls by Dividing Elements

With at least one element checked in the Dividing Elements Retrieval List and a wall type chosen at the "Wall Types" dropdown box, you can click the "Add Walls by Dividing Elements" button to add the checked dividing elements with their respective intersecting walls of the selected type to the Parts Retrieval List.



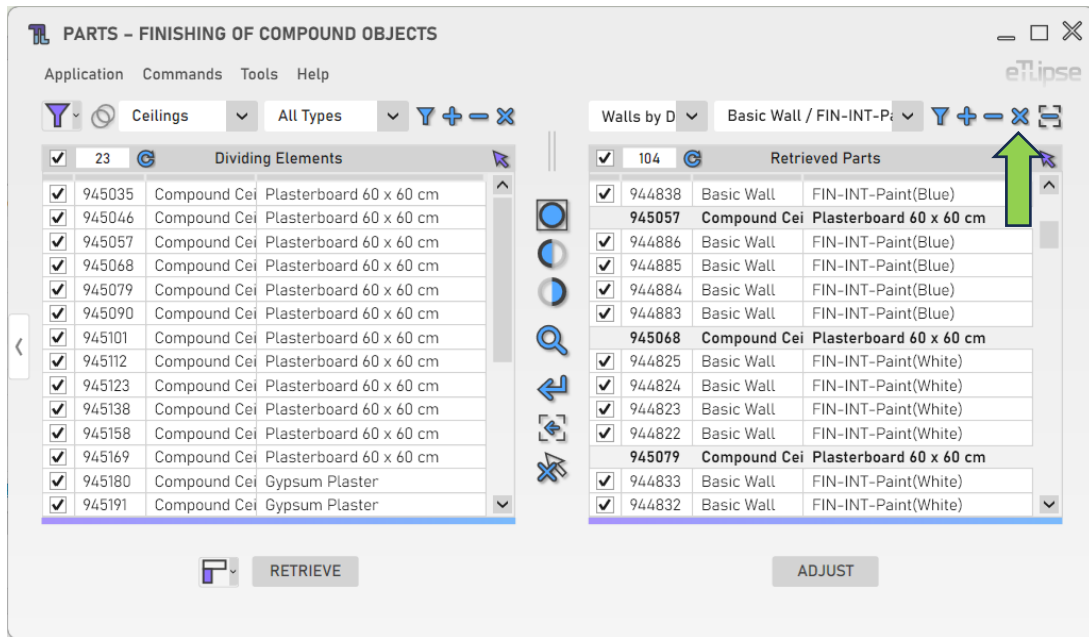
Removing Walls by Type

In order to remove walls of a specific type from the list, you must choose a type in the "Wall Types" dropdown box and click the "Remove Walls" button.



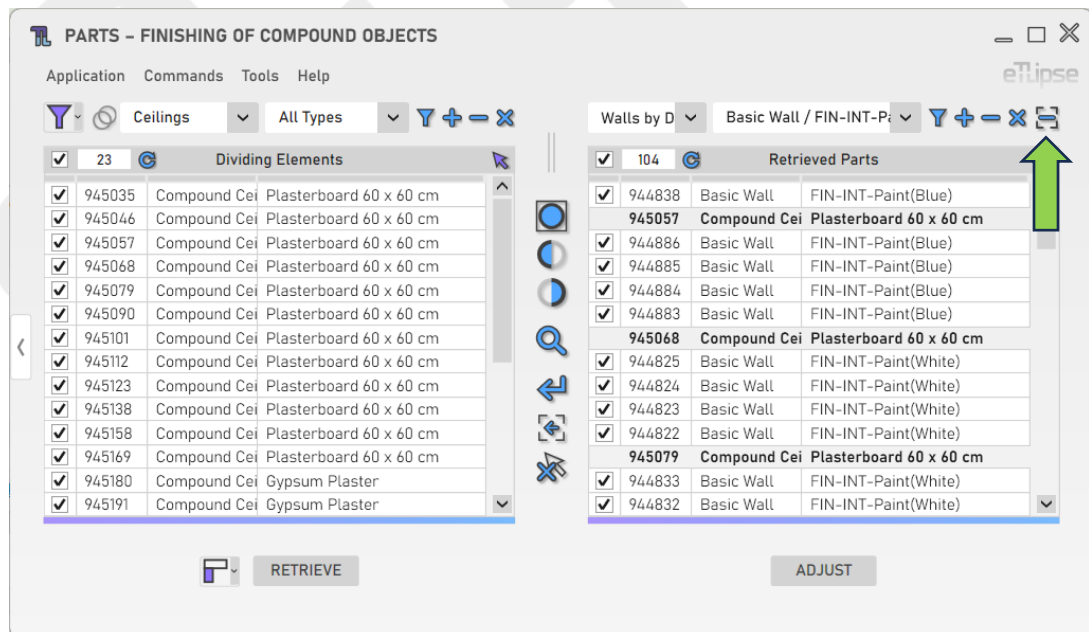
Clearing the listed Walls

In order to clear the list, you must click the “Clear Retrieved Walls” button.



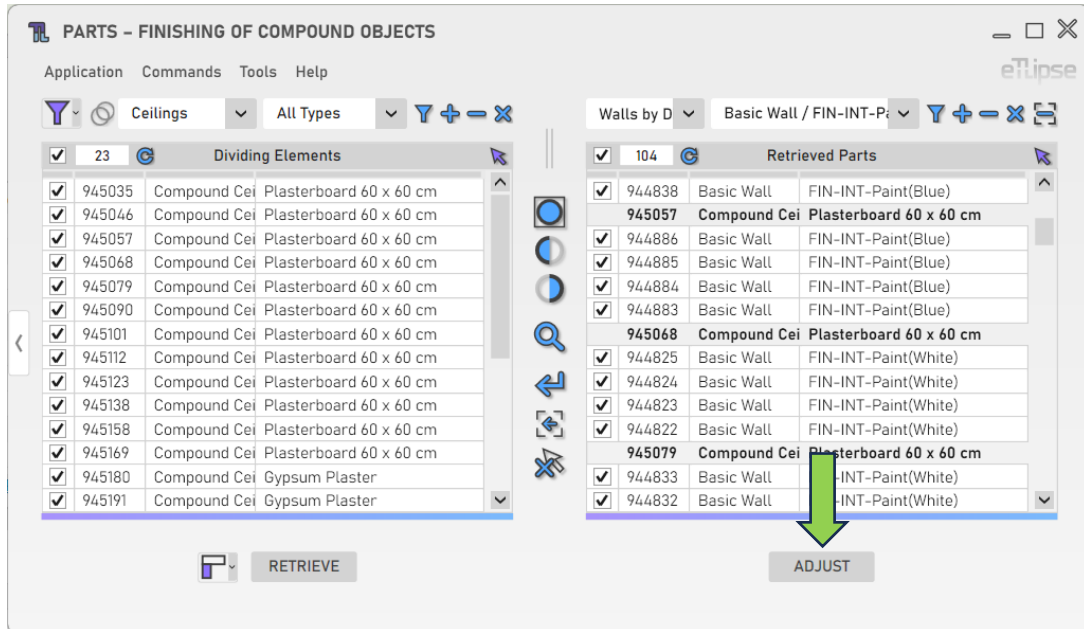
Removing Walls from the List by Picking

In order to manually pick walls in the Revit view and remove them from the list, you must click the “Remove Walls from List by Picking” button.



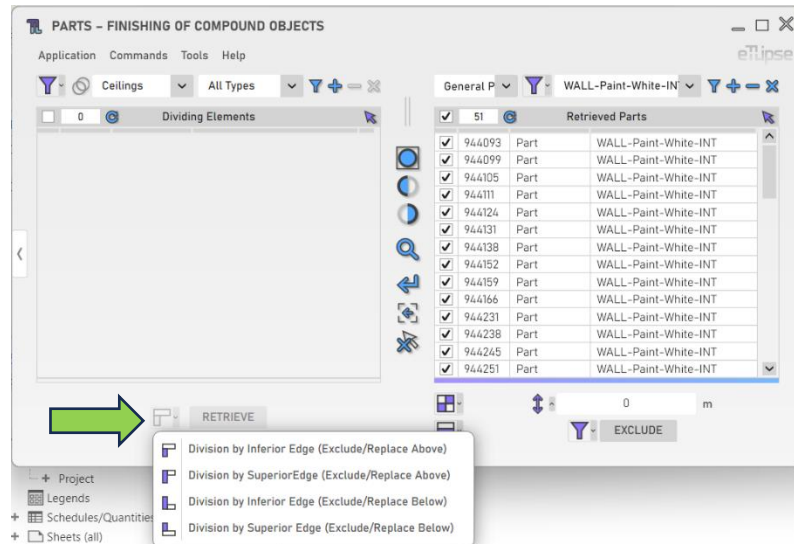
Adjusting the Height of the Walls by Dividing Elements

In order to lower the height of the checked walls to match the height of the edges of the checked dividing elements, you must click the "Adjust Height of Walls by Dividing Elements" button.



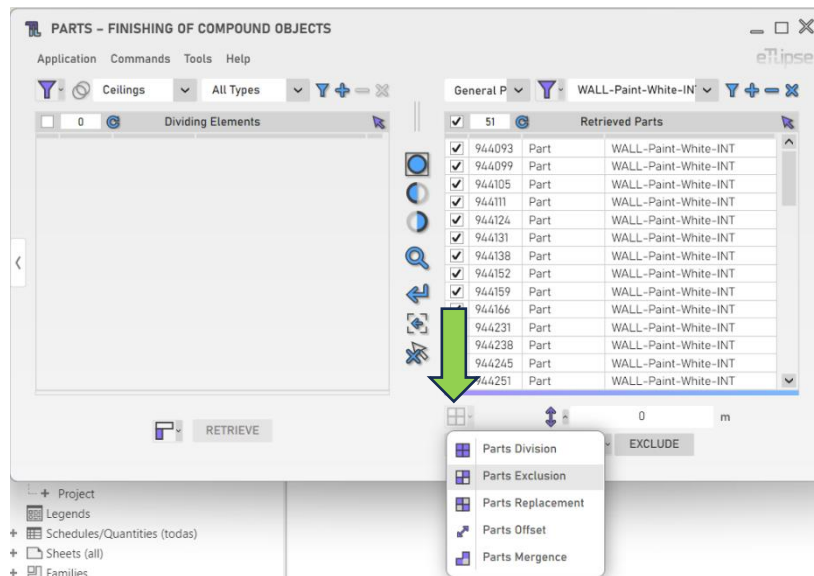
DIVIDING EDGE MODES

By setting the **Dividing Edge** mode at the indicated dropdown box, you set the reference of the dividing element edge that will act as the dividing line in division/exclusion/replacement operations with dividing elements.



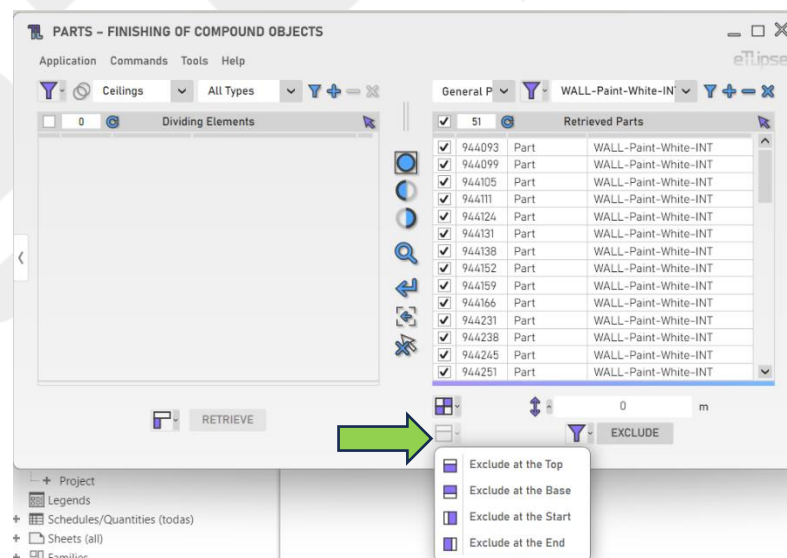
PARTS OPERATION MODE: PARTS EXCLUSION

In order to access the tools for exclusion of subdivisions of the parts checked in the Parts Retrieval List, the "Parts Exclusion" mode must be selected at the "Toggle Parts Operation Mode" dropdown box.



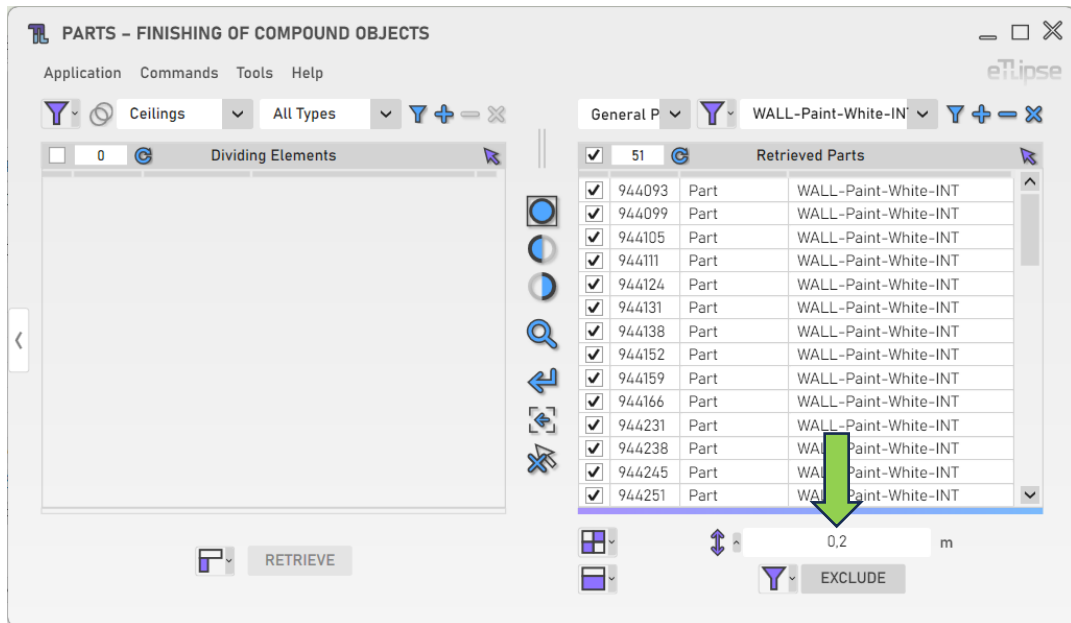
Exclusion Modification Modes

There are four different modification modes to exclude portions of the parts checked in the Parts Retrieval List, based on direction and the position of the portion to be excluded. They are: "Exclude at the Top", "Exclude at the Base", "Exclude at the Start", "Exclude at the End".



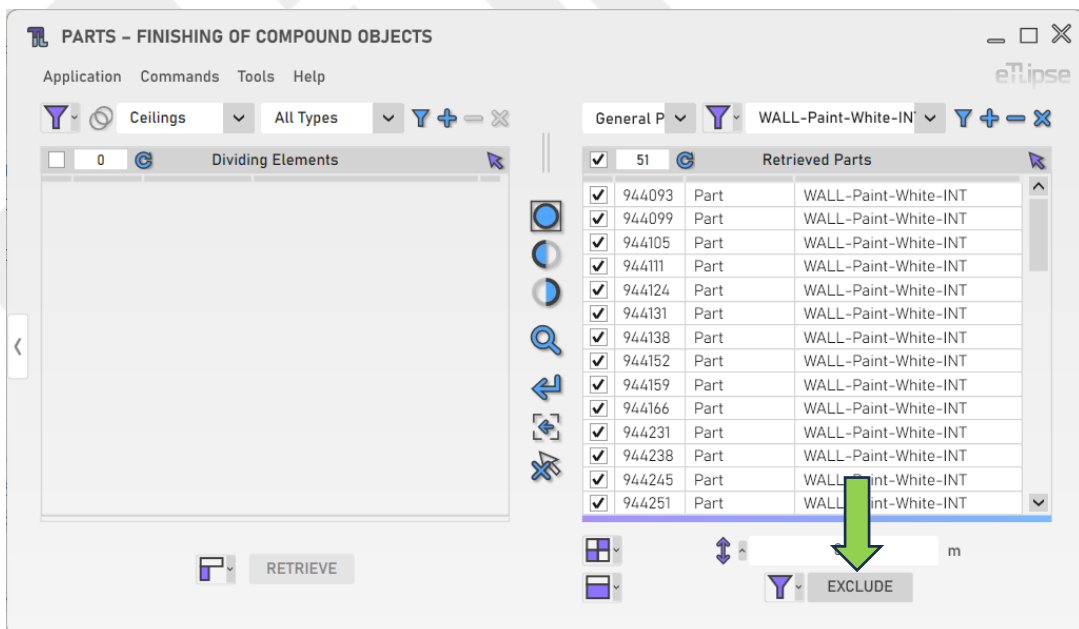
Offset Length

To set the value for the division of the part's face, provide a length value in the indicated text box.



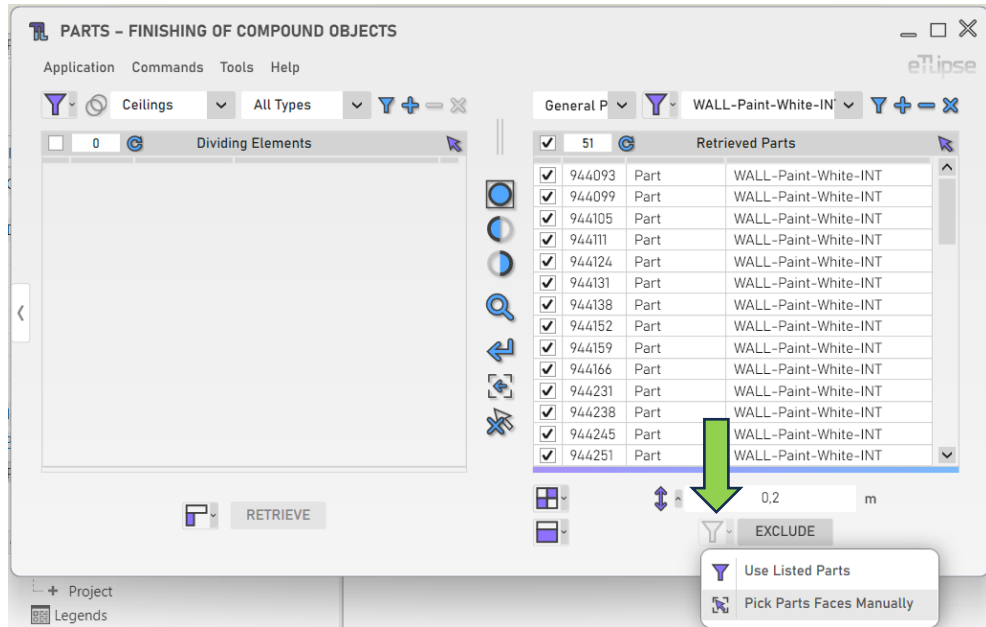
Excluding Parts Subdivisions

To perform the exclusion of the parts subdivisions starting from the division line set by the provided offset value, click the "Divide and Exclude Wall Parts by Filtering" button.



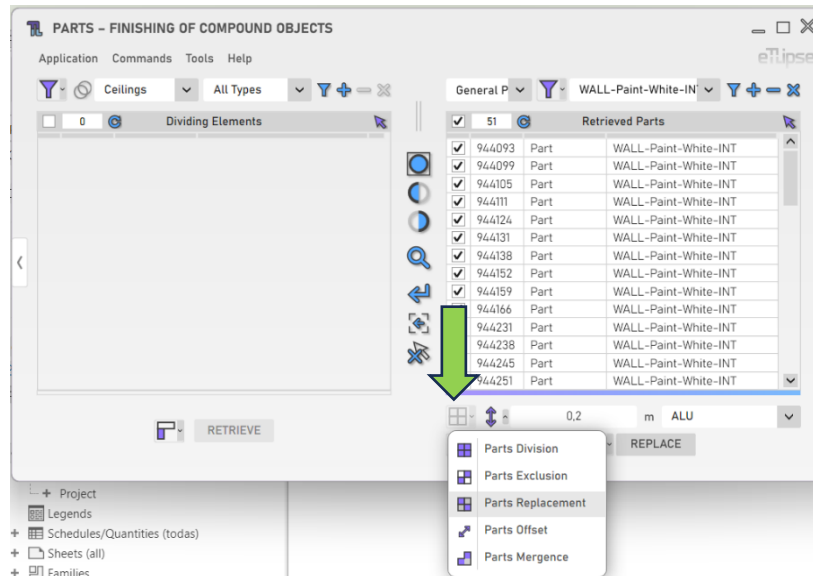
Manually Excluding Parts Subdivisions

In order to manually perform this operation (by picking the faces of the parts you wish to define as starting points for the division offset), you must enable the “Pick Parts Faces Manually” option at the “Toggle Parts Selection Mode” dropdown box.



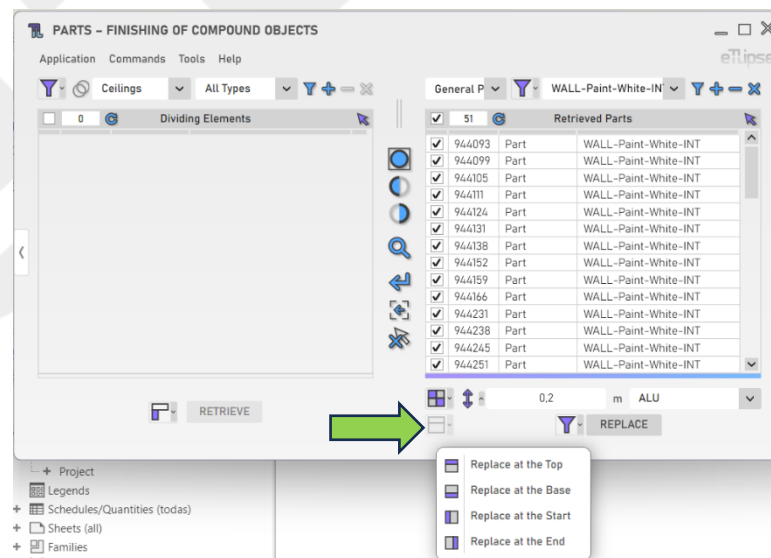
PARTS OPERATION MODE: PARTS REPLACEMENT

In order to access the tools for replacement of subdivisions of the parts checked in the Parts Retrieval List, the "Parts Replacement" mode must be selected at the "Toggle Parts Operation Mode" dropdown box.



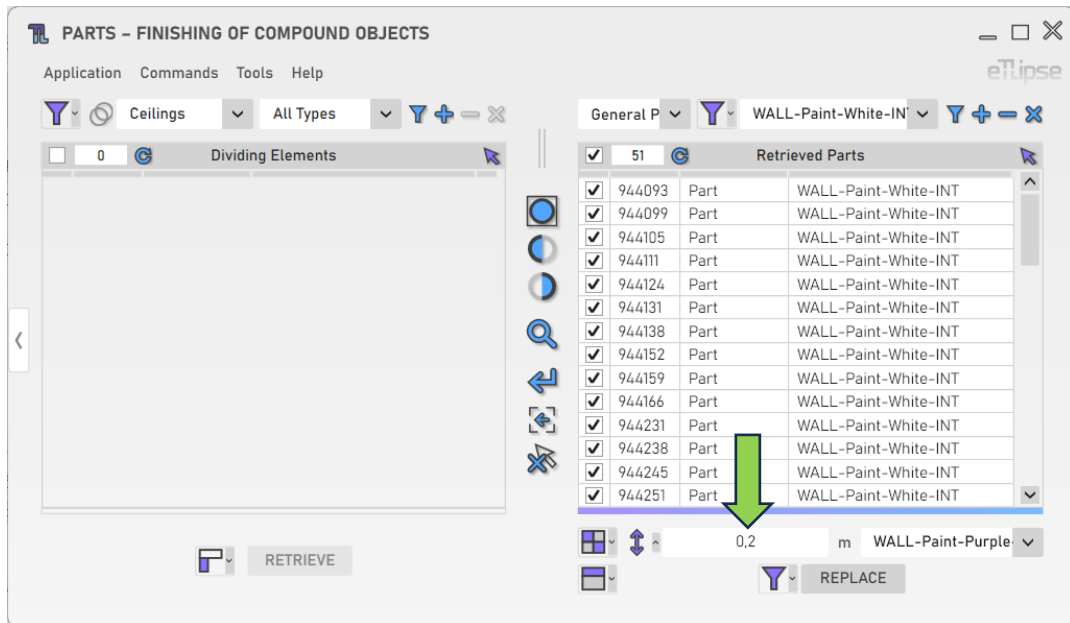
Replacement Modification Modes

There are four different modification modes to replace portions of the parts checked in the Parts Retrieval List, based on direction and the position of the portion to be replaced. They are: "Replace at the Top", "Replace at the Base", "Replace at the Start", "Replace at the End".



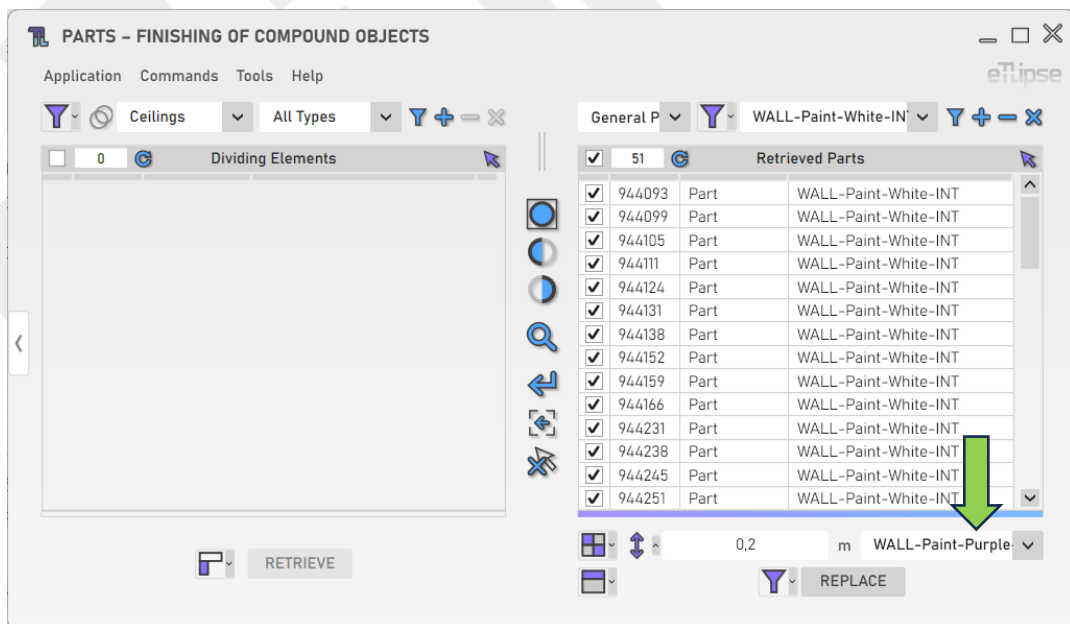
Offset Length

To set the value for the division of the part's face, provide a length value in the indicated text box.



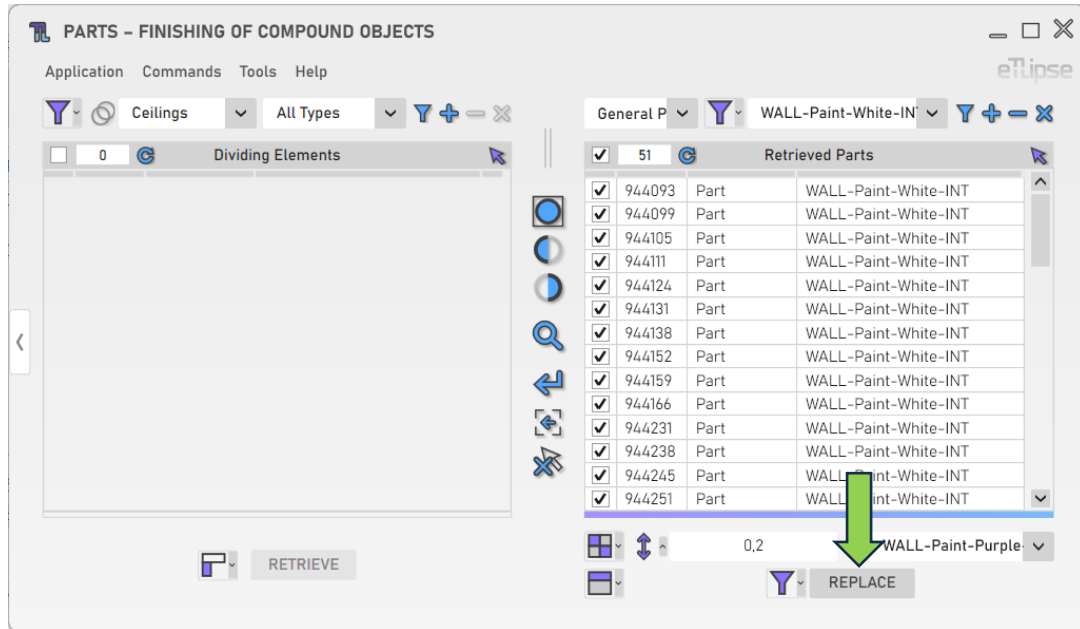
Replacement Material

To set the material of the new subdivision in the replacement, choose a material in the "Project Materials" dropdown box.



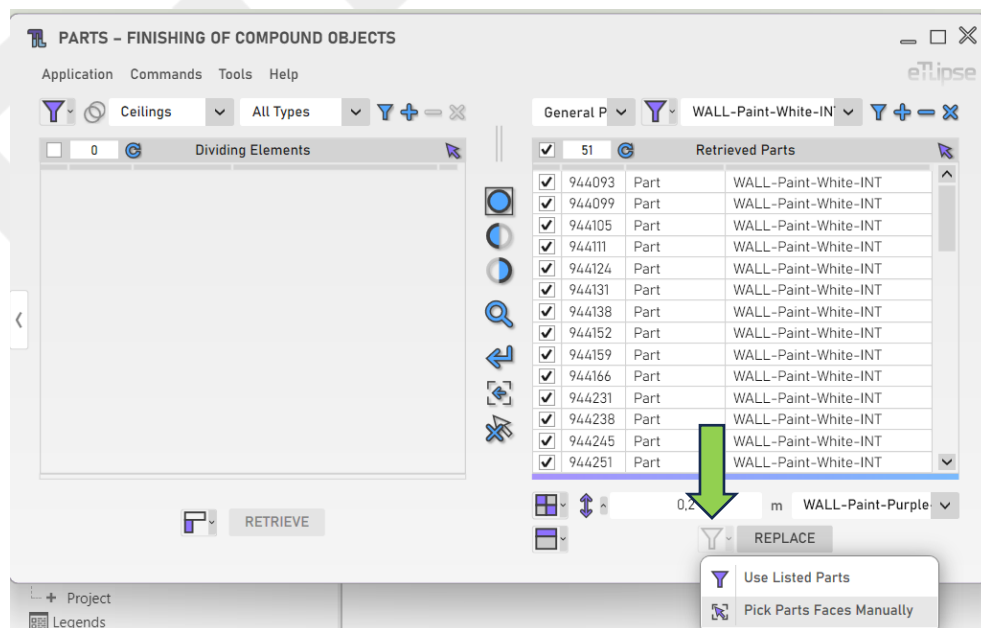
Replacing Parts Subdivisions

To perform the replacement of the parts subdivisions by the selected material starting from the division line set by the provided offset value, click the “Divide and Replace Wall Parts by Filtering” button.



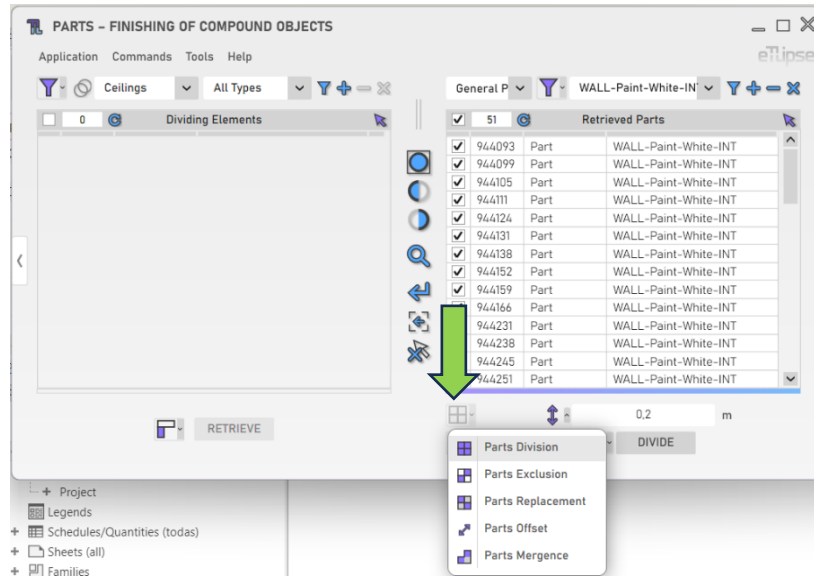
Manually Replacing Parts Subdivisions

In order to manually perform this operation (by picking the faces of the parts you wish to define as starting points for the division offset), you must enable the “Pick Parts Faces Manually” option at the “Toggle Parts Selection Mode” dropdown box.



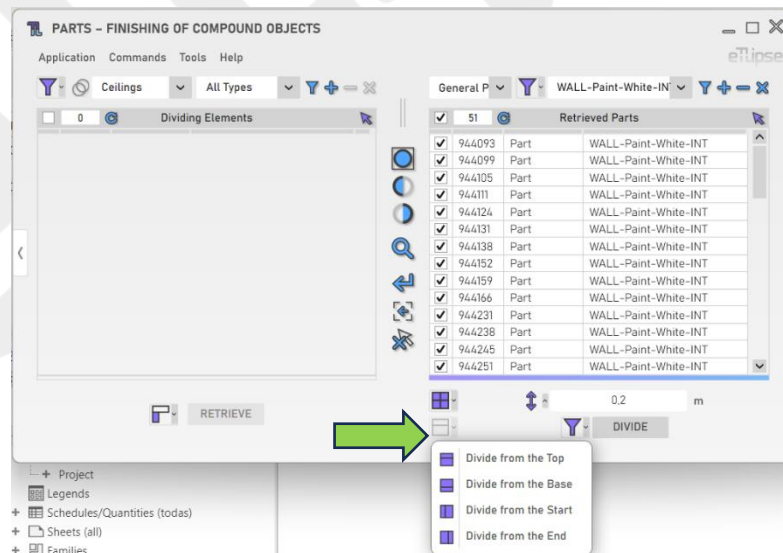
PARTS OPERATION MODE: PARTS DIVISION

In order to access the tools for division of the parts checked in the Parts Retrieval List, the “Parts Division” mode must be selected at the “Toggle Parts Operation Mode” dropdown box.



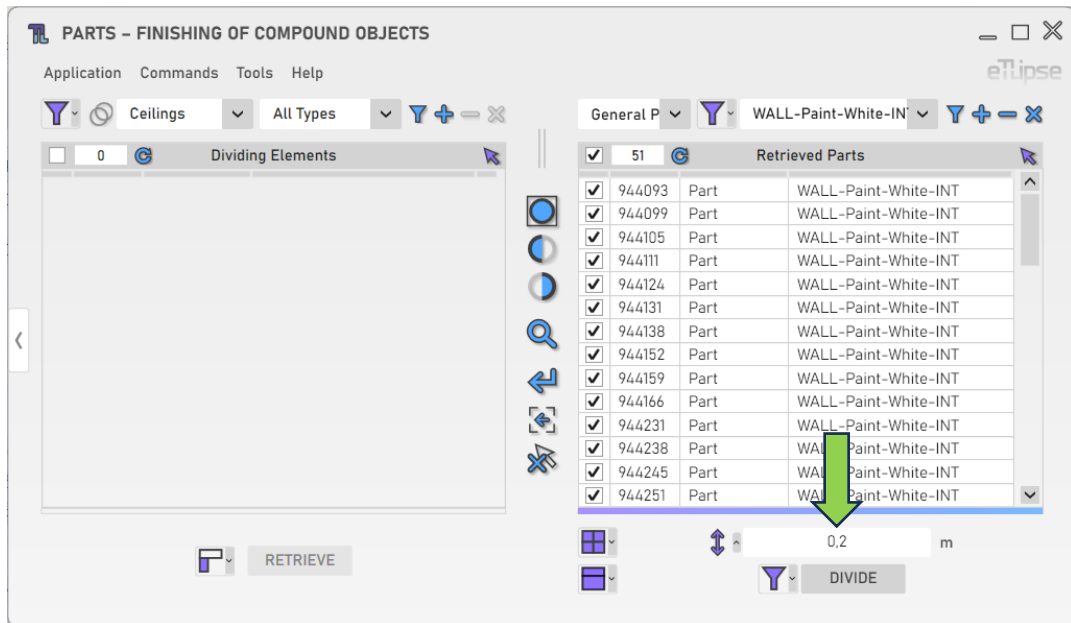
Division Modification Modes

There are four different modification modes to divide the parts checked in the Parts Retrieval List, based on direction and the position of portion to be divided. They are: “Divide from the Top”, “Divide from the Base”, “Divide from the Start”, “Divide from the End”.



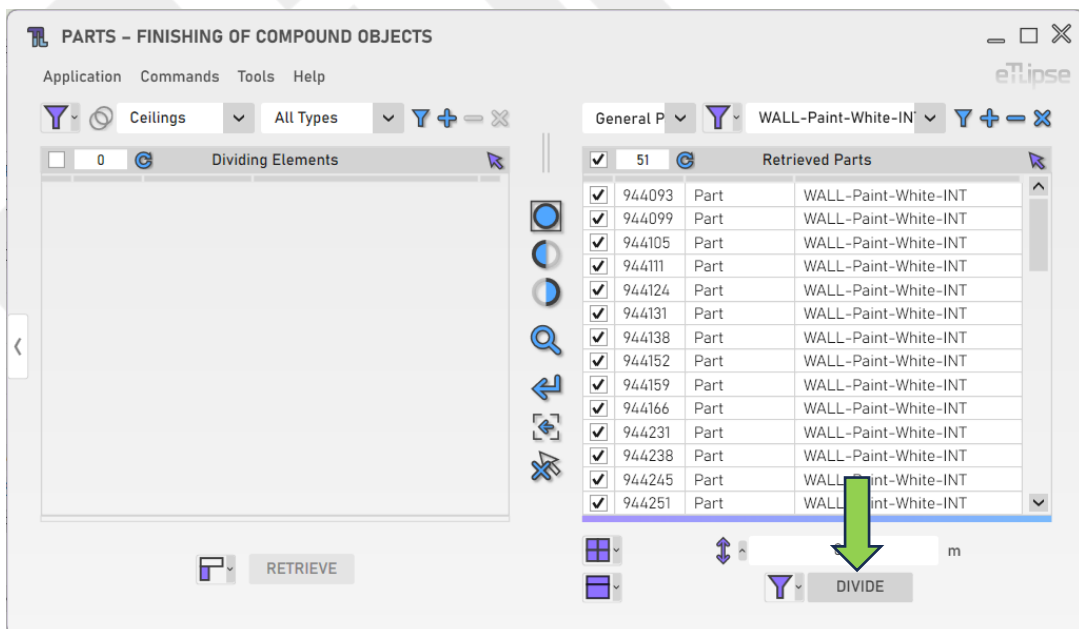
Offset Length

To set the value for the division of the part's face, provide a length value in the indicated text box.



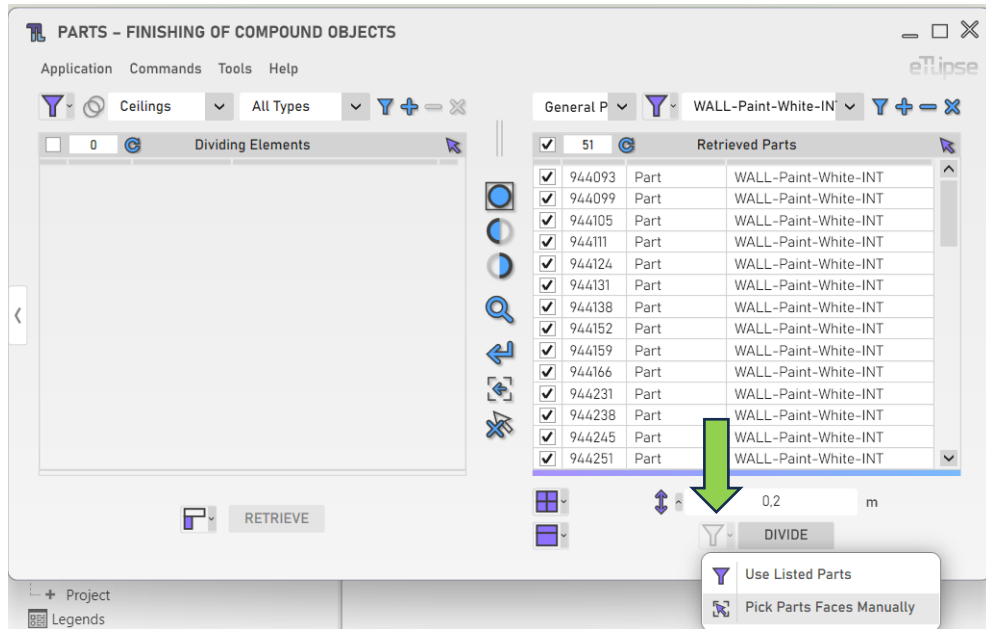
Dividing Parts

To perform the division of the parts starting from the division line set by the provided offset value, click the "Divide Wall Parts by Filtering" button.



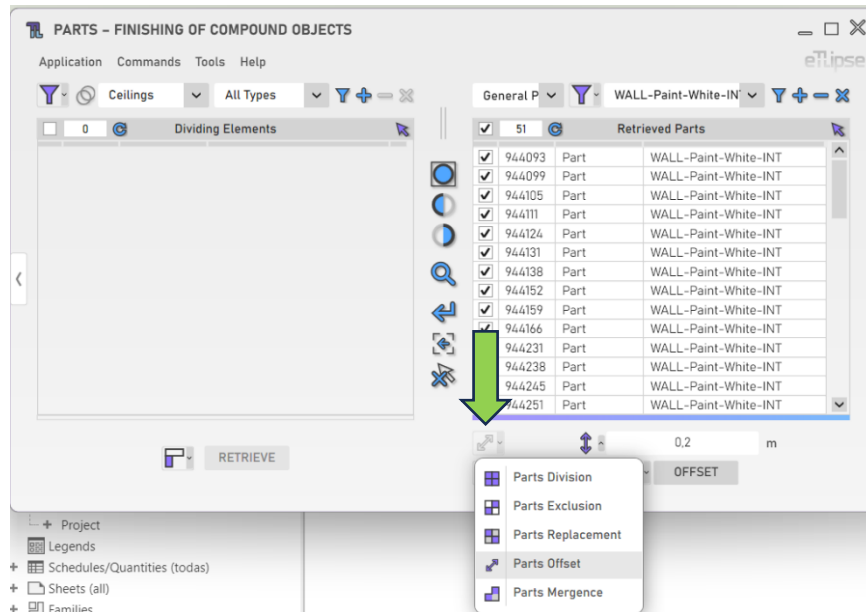
Manually Dividing to Parts

In order to manually perform this operation (by picking the faces of the parts you wish to define as starting points for the division offset), you must enable the "Pick Parts Faces Manually" option at the "Toggle Parts Selection Mode" dropdown box.



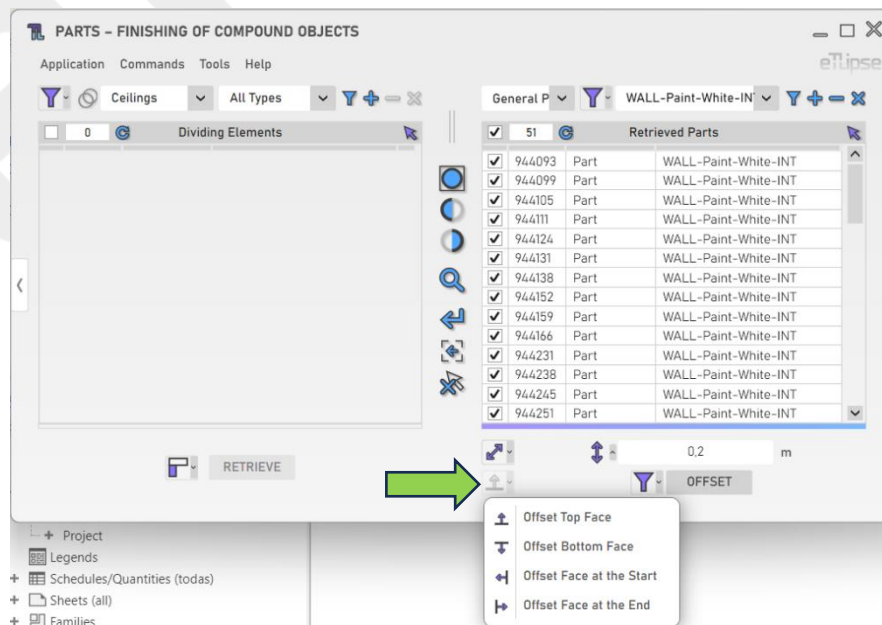
PARTS OPERATION MODE: PARTS OFFSET

In order to access the tools for unidirectional expansion or contraction of multiple parts by a given offset value at once, the "Parts Offset" mode must be selected at the "Toggle Parts Operation Mode" dropdown box.



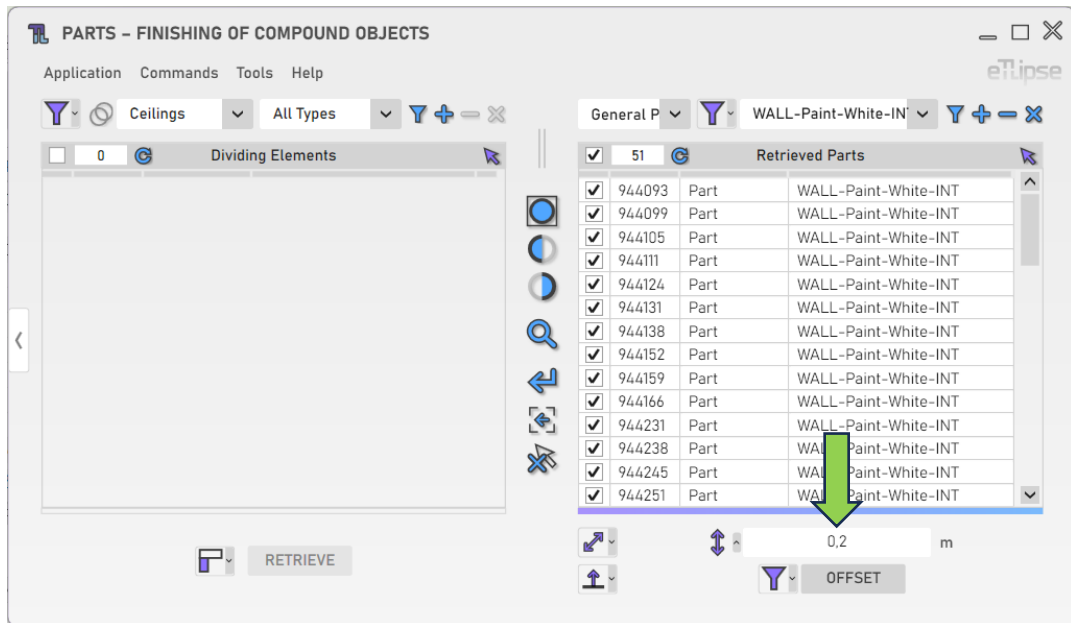
Offset Reference Modes

There are four different offset reference modes to apply an offset value to a specific face of each part checked in the Parts Retrieval List, based on direction of the offset and the position of the face. They are: "Offset Top Face", "Offset Bottom Face", "Offset Face at the Start", "Offset Face at the End".



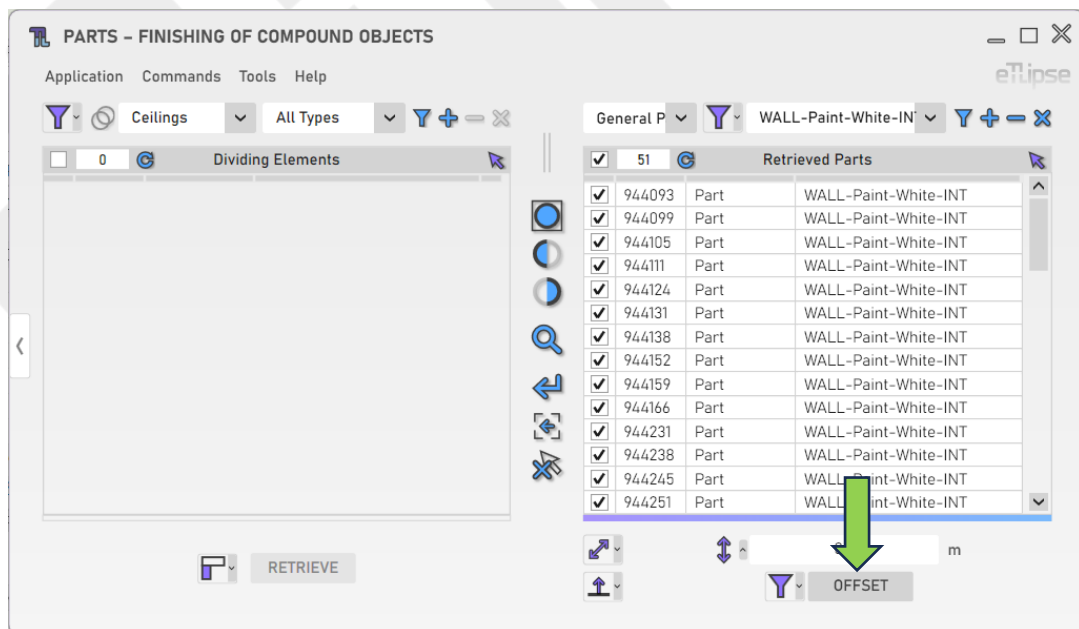
Offset Length

To set the value for the offset of the part's face, provide a length value in the indicated text box.



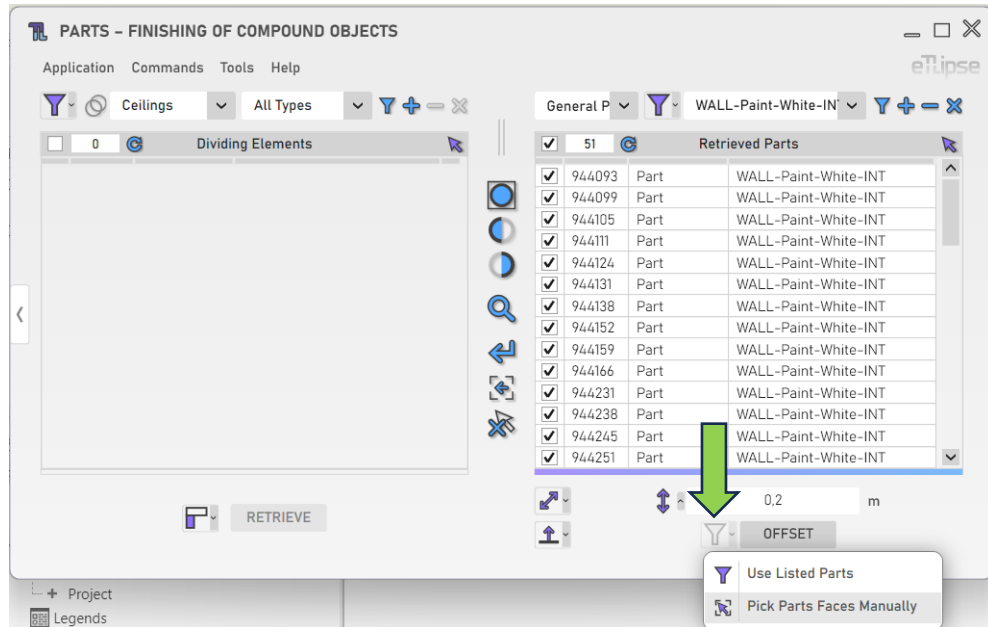
Applying Offset to Parts

To perform the contraction (negative values) or expansion (positive values) of the parts by the provided offset value, click the "Parts Face Offset" button.



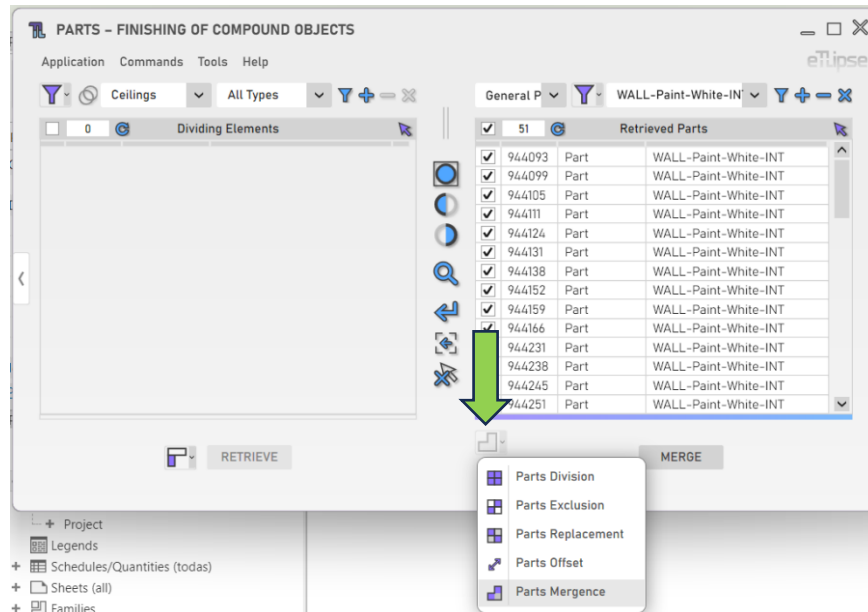
Manually Applying Offset to Parts

In order to manually perform this operation (by picking the faces of the parts you wish to apply the offset to), you must enable the "Pick Parts Faces Manually" option at the "Toggle Parts Selection Mode" dropdown box.



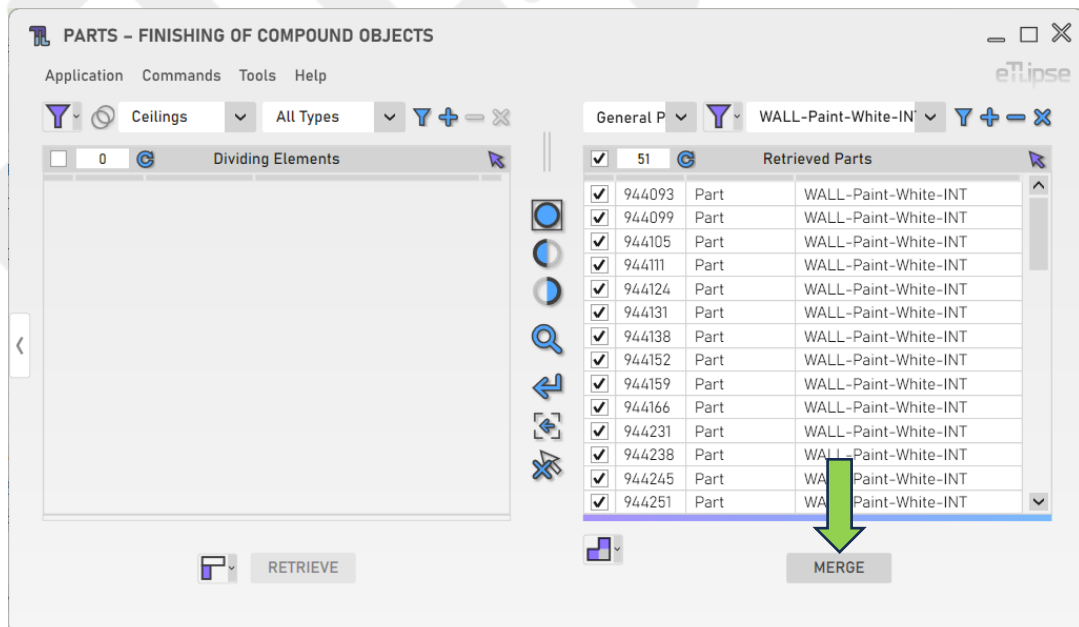
PARTS OPERATION MODE: PARTS MERGENCE

In order to access the tools for mergence of multiple adjacent parts with the same material at once, the "Parts Mergence" mode must be selected at the "Toggle Parts Operation Mode" dropdown box.



Merging Parts

To merge the adjacent checked parts with the same material, click the "Merge Parts" button.



OTHER TOOLS

Export Parts by Dividing Elements to a CSV file

You can export a table with the current list of parts, grouped by their respective dividing elements, to a .csv file. To do so, you just need to go to the menu "Tools>Export Elements from Rooms to .CSV".

