



What's New

in PowerPack for Autodesk Revit 2024

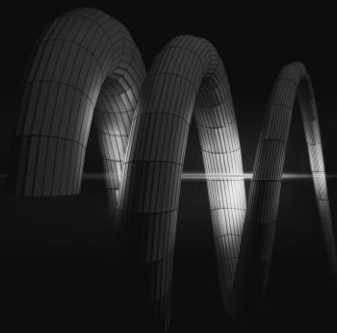


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1. Welcome to Graitec Powerpack for Revit 2024

We are delighted to inform you that GRAITEC has released an updated version of PowerPack for Revit. This latest update incorporates a host of new features and improvements, with a special focus on tools designed to simplify the creation of the analytical model. In addition to these new features, the update also includes a range of bug fixes that were previously impacting some geographic regions. We aim to continually enhance the functionality and usability of PowerPack for Revit, and we are confident that this latest update will prove to be a valuable addition to our users.



2. General

2.1. Powerpack names

We are thrilled to announce that we have rebranded our popular Powerpack products to better reflect their features and functionality. The rebranding involves four Powerpack versions:

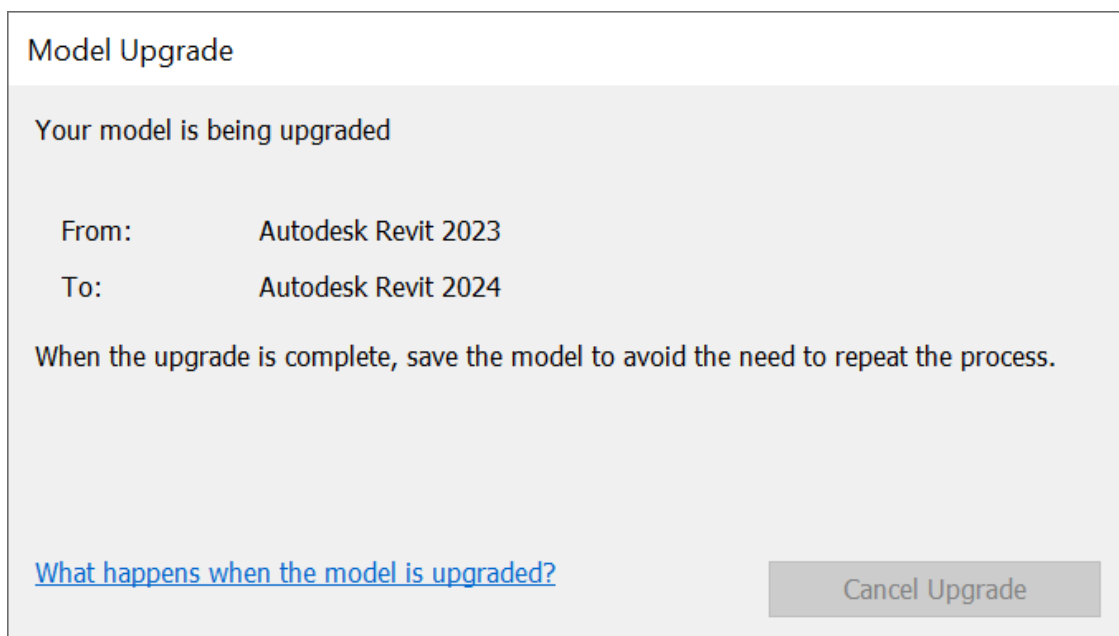
- **Powerpack Standard** is now **Powerpack Start Edition**, providing users with essential tools to initiate their Revit journey.
 - **Powerpack Professional** has been renamed as **Powerpack for Revit**, offering advanced features and functionality for experienced Revit users.
 - **Powerpack Premium Concrete** is now **PowerPack for Revit Rebar Detailing** providing an all-in-one solution for Revit users who need to detail rebar structures.
- Powerpack Premium Concrete** with concrete design extension is now **PowerPack for Revit Rebar Design + Detailing** delivering a complete solution for Revit users who need to design and detail rebar structures.

With this rebranding, our users will have a clear understanding of the capabilities of each Powerpack edition and can easily choose the one that best suits their needs. We are confident that our new branding will help us to continue providing the highest quality Revit add-ons to our users.

2.2. Update all Graitec libraries

As the PowerPack 2024 is only compatible with Revit 2024, all content provided with the PowerPack has been updated to the current version of Revit.

This means that every library, template, and content such as Rebar Schedules Template, Legends dimension, and Graitec's families have been updated. This update will result in much better-performing software since automatic updates are not performed anymore when loading those elements.



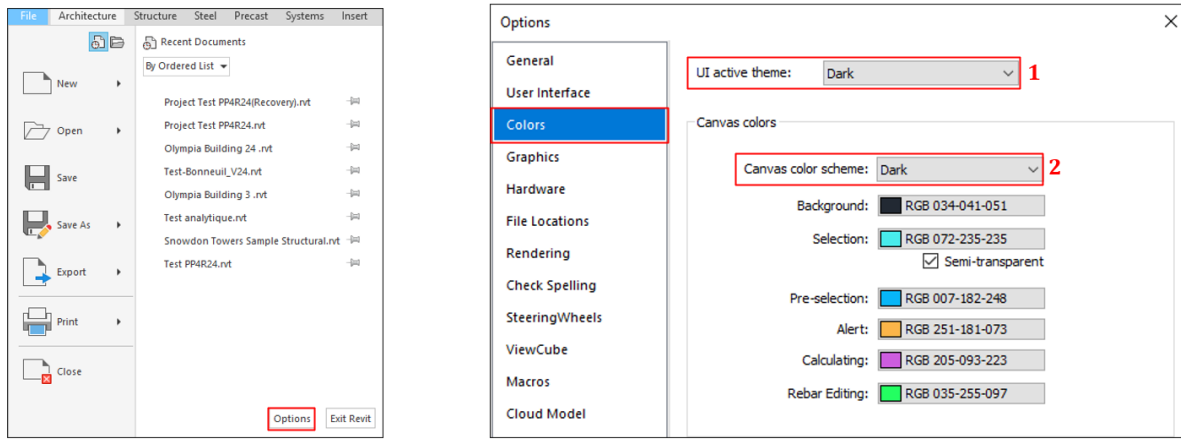
Libraries update

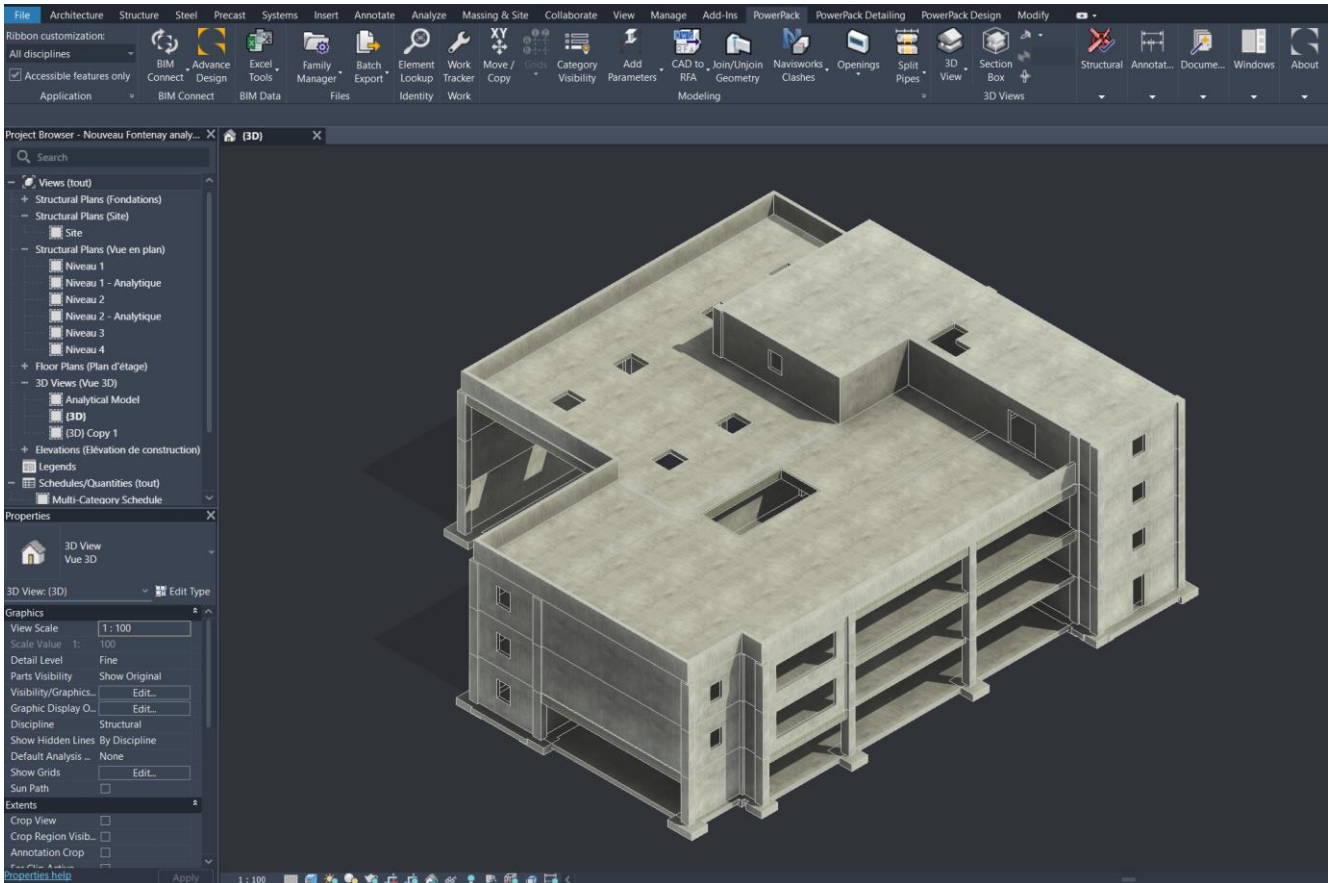
2.3. Dark Theme

The user interface of our Powerpack for Revit is now compatible with the new Dark Theme of Revit 2024. This means that you can apply the new color scheme to both Revit and the Powerpack through the Options Menu. To make changes to the theme settings, simply follow these steps:

- Click on the File tab, then select Options and choose the Colors tab.
- Under the UI active theme option, you can select the Dark Theme (1).
- To set the drawing area theme to either Light or Dark, go to the Canvas color scheme option on the same tab (2).

By following these steps, you can easily customize the appearance of Revit and the Powerpack to best suit your preferences.





Dark theme

2.4. Enter to activate the last tool used

This behavior is present for all Revit tools. Now it is available in our Powerpack, users can Press <ENTER> to activate the last tool used.

The user doesn't have to **right-click** and click on **Repeat** like in older versions.

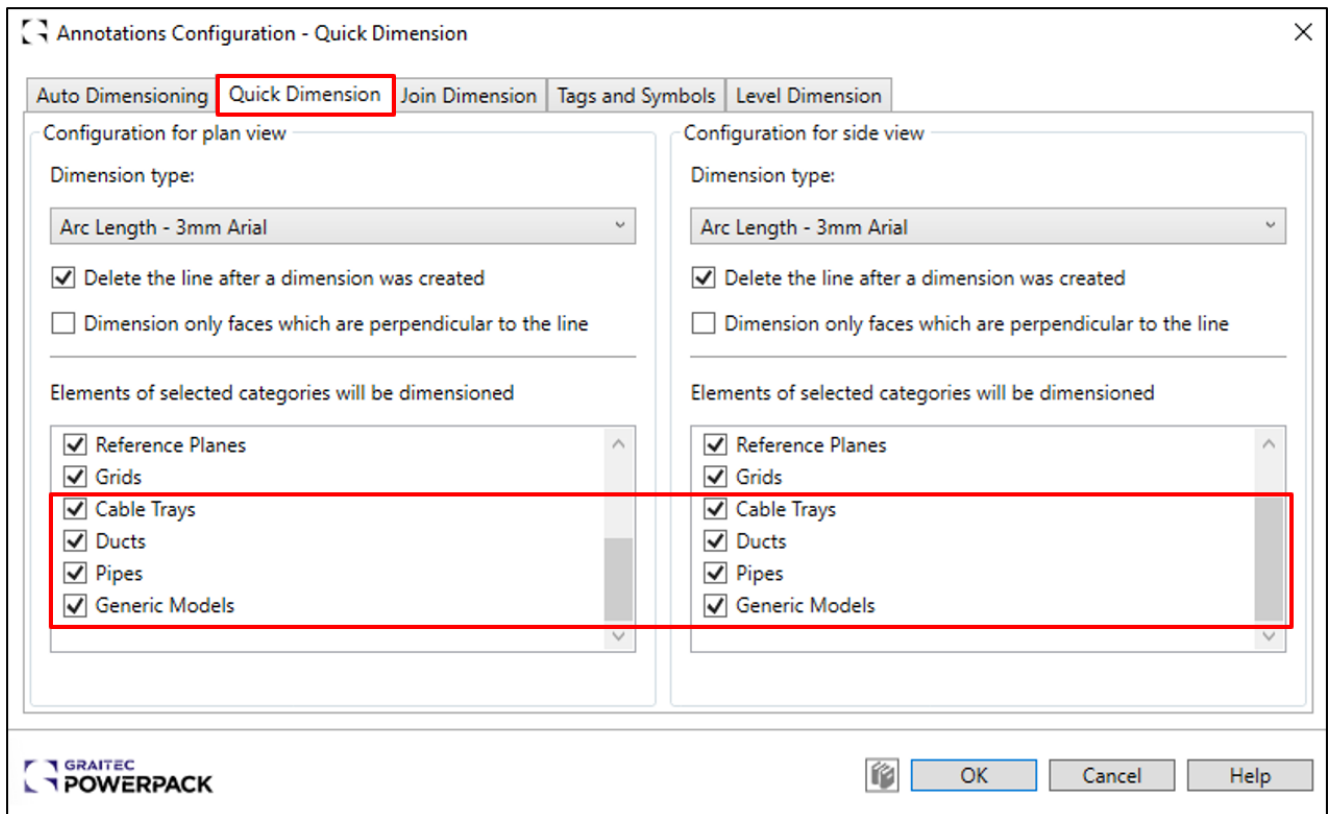


Press <ENTER> to activate the last tool used

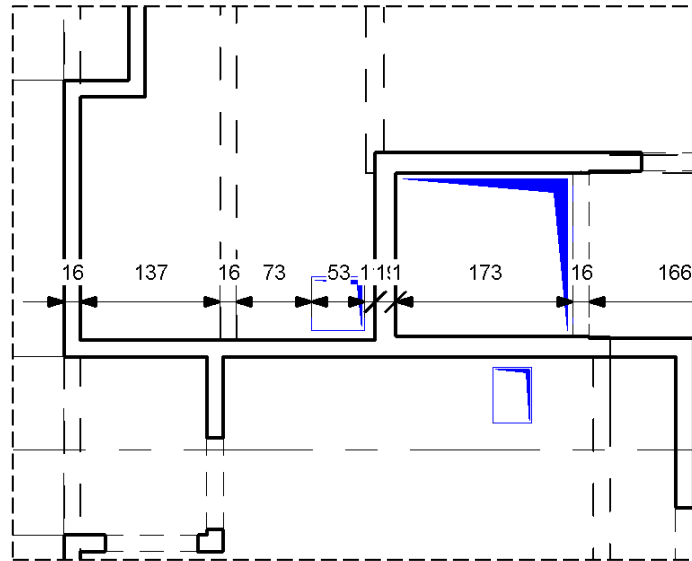
3. PowerPack Start Edition

3.1. Quick Dimension for MEP objects and Generic Models

Our Quick Dimension tool now supports MEP elements and Generic Models such as slab openings, allowing for easier and more accurate dimensioning in the MEP design process.



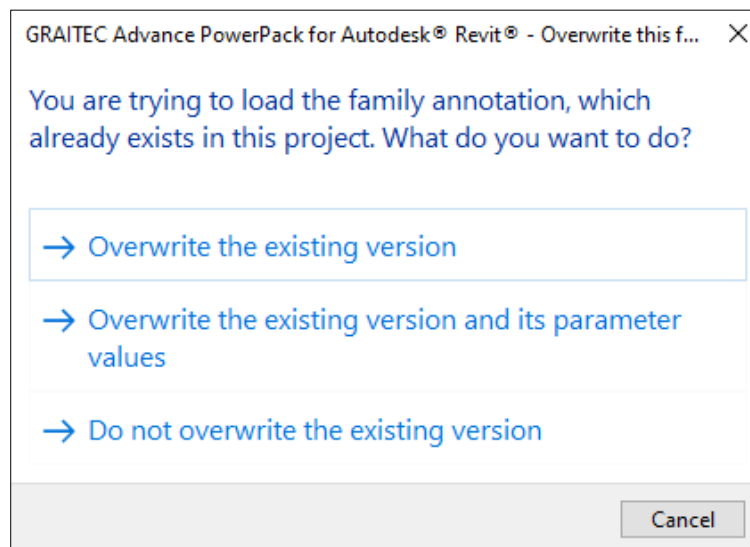
Quick dimension setting interface



Example for generic models

3.2. Family Manager: Overwrite loaded families

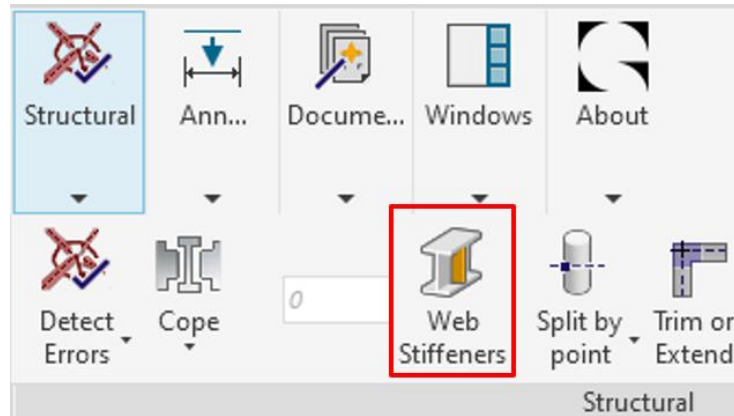
The Family Manager has the possibility to overwrite loaded families. When modifications are made to a family the Family Manager will now give you the option to re-load and overwrite the pre-loaded family. The options are identical to when you load an edited family from the family editor.



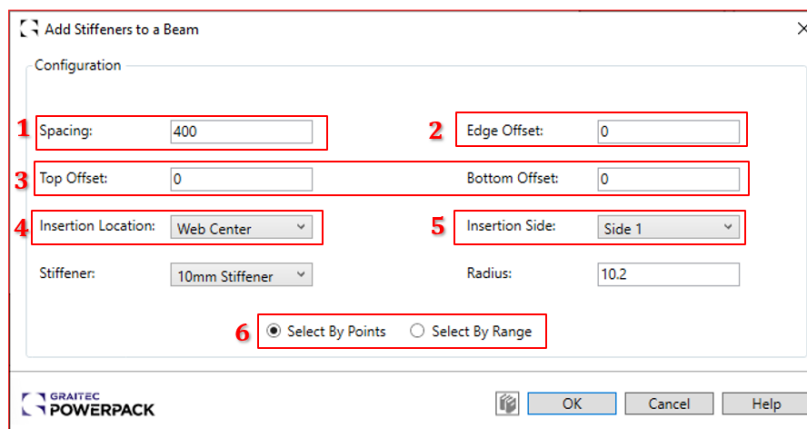
3.3. Web Stiffeners

Users can now add stiffeners to W-beams or I-beams with the added functionality to customize various parameters such as spacing, offset, insertion location, insertion side, and stiffener size.

The tool is available in the **Powerpack Ribbon => Structural => Web Stiffeners**



After clicking Web Stiffener, select a W-beam or I-beam to add stiffeners to. The user is presented with the following interface:



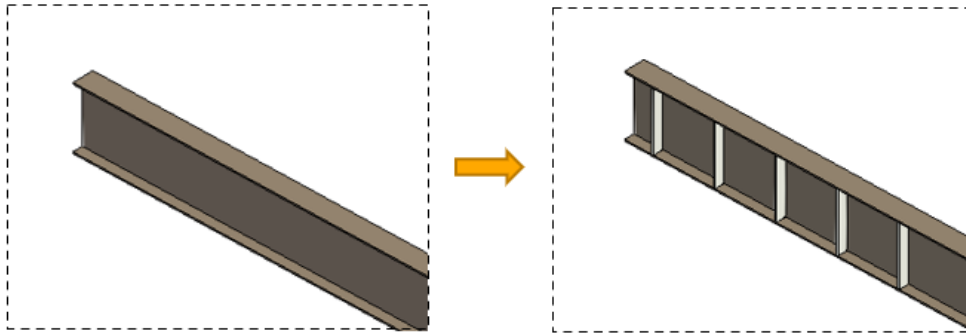
Web stiffener setting interface

Select spacing, offsets, insertion location, insertion side, and stiffener sizes.

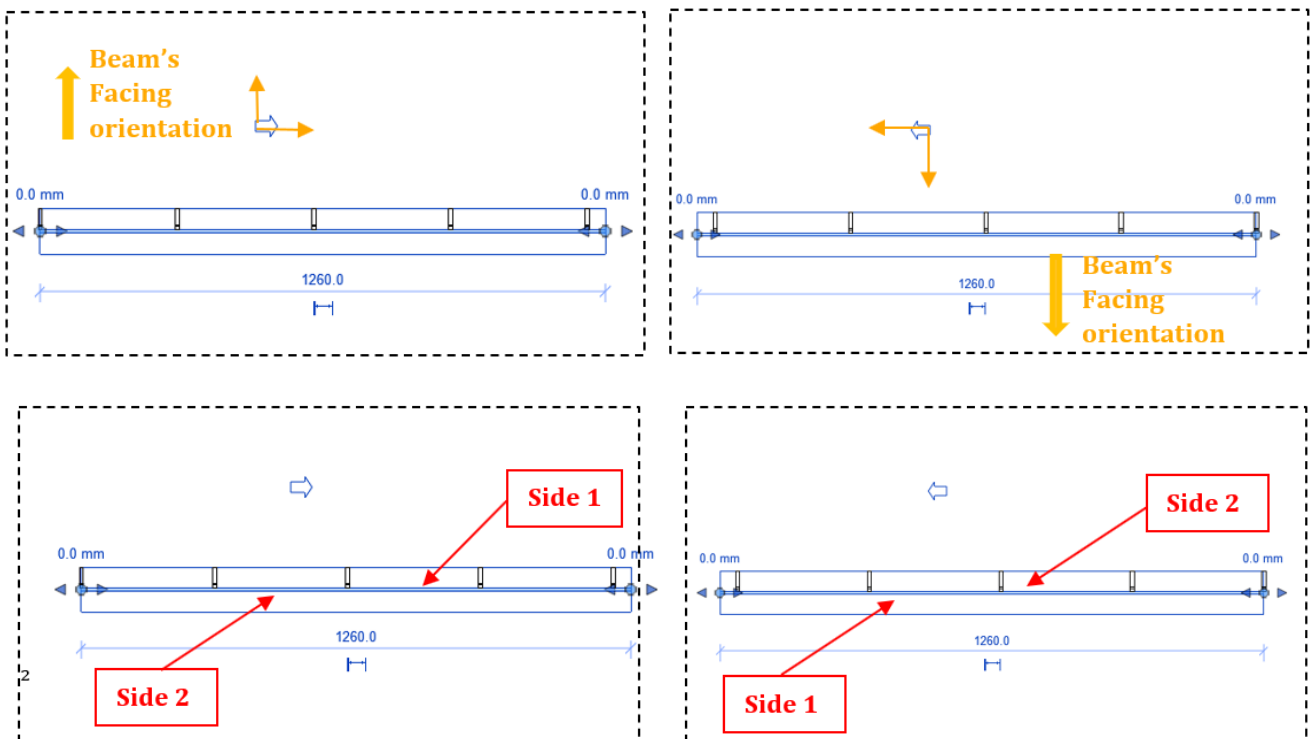
1. **Spacing:** Adjust the spacing between stiffeners
2. **Edge offset:** Shrink or extend stiffeners
3. **Top/Bottom offset:** Add a stiffener offset from top/bottom of flange
4. **Insertion Location:** Only web center is available
5. **Insertion Side:** there, you can choose which side of the beam to add stiffeners:
 - Side 1: determined by the direction in which the element is modelled
 - Side 2: determined by the direction in which the element is modelled
 - Both: Stiffener added to both sides.
 - Both staggered: Stiffeners will be placed on alternating side of the web based on spacing and click on select by range before selecting point on stiffener.
6. **Select By Points/Range:**
 - Select by points: select points on the beam to place stiffeners.
 - Select by range: select the beginning and the end of stiffeners you want to place, and they will be placed and adjusted according to spacing.

The web stiffeners that are added to the beams belong to the "Generic Model" category. To view them in the model, the "Generic Model" category needs to be enabled in the Visibility/Graphics settings of the view.

Web stiffeners only place in a 3D view but can be positioned or moved in a 2D view afterward.



Add stiffeners in 3D views



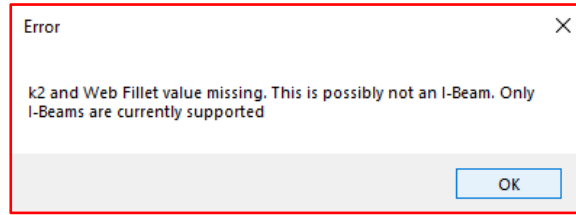
Add stiffeners to side 1/2 based on the beam's orientation

Important: Make sure that the selected beam's family has parameters: k2 and Web fillet values.

Structural Section Geometry	
Width	17.11 cm
Height	35.14 cm
Flange Thickness	0.97 cm
Web Thickness	0.70 cm
Web Fillet	1.02 cm
Centroid Horizontal	8.56 cm
Centroid Vertical	17.57 cm

Beam's structural geometry

Otherwise, you will get an error message telling the user that there are missing values.



Error message if k2 and Web fillet values are not defined

Also, the generated stiffeners are Generic Models and do not shrink or extend if you change the beams type or family. Users will need to redo the command if they modify the beam.

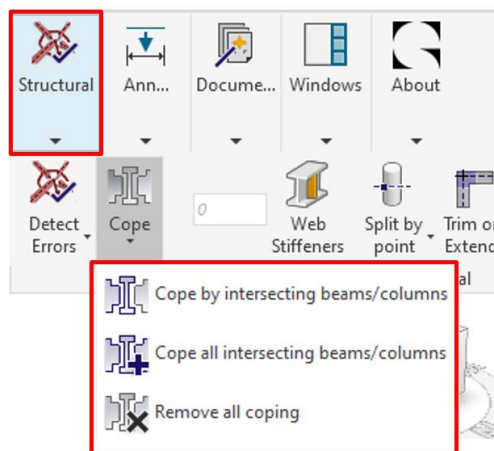
3.4. Cope beams/columns

Revit has a coping tool that aids in the presentation of detail views by applying a cope to intersecting members. However, the default coping tool only handles one coping cut at a time. In cases where multiple elements require coping, the process becomes time-consuming.

Our new tool "Cope" has been developed to overcome this limitation. With this tool, users can automatically cope a beam/column with any intersecting beams or cope all intersecting beams/columns with a selected beam/column and apply an offset or remove all coping. This tool enables more efficient and accurate coping of beam/column connections compared to the default coping tool. One of the key advantages of this tool is its speed and precision.

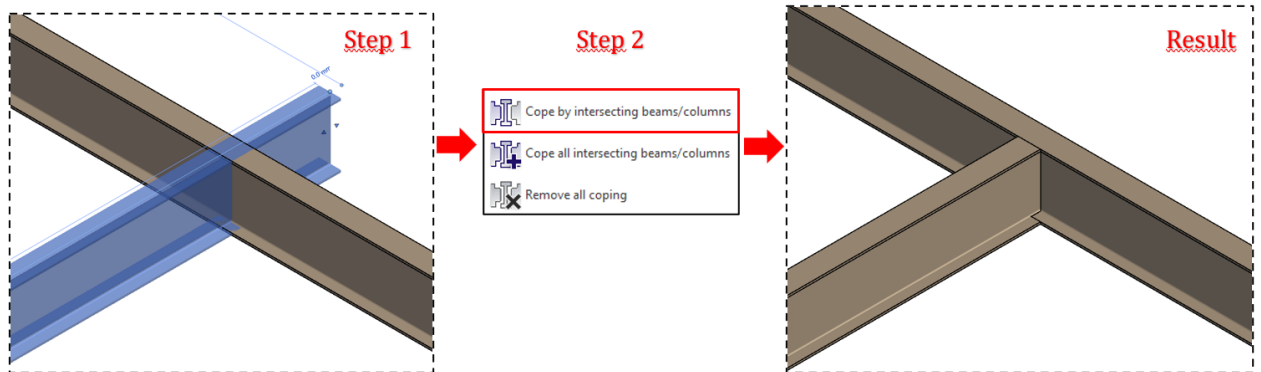
The tool is available in the **Powerpack Ribbon => Structural => Cope** and has three (3) options:

- To apply coping to a beam, select the beam and then click on the "Cope by intersecting beams/columns" command from the menu.
- To apply coping to multiple beams, select a common intersecting beam and click on the "Cope all intersecting beams/columns" command.
- To remove all coping for a beam/column select the beam/column and execute the remove all copings. To remove all coping for many beams/columns, select the common intersecting beam/column and run the same command.



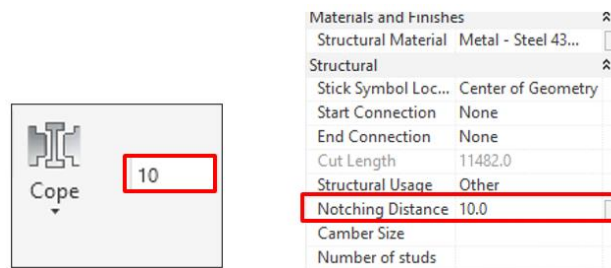
To use this command, the user needs to:

1. Select a beam or column.
2. Chose which function you want to apply.



How to use the command "Cope beams/columns"

Coping offsets (notching distance) can be set within the built-in app or modified after the Revit Properties palette.

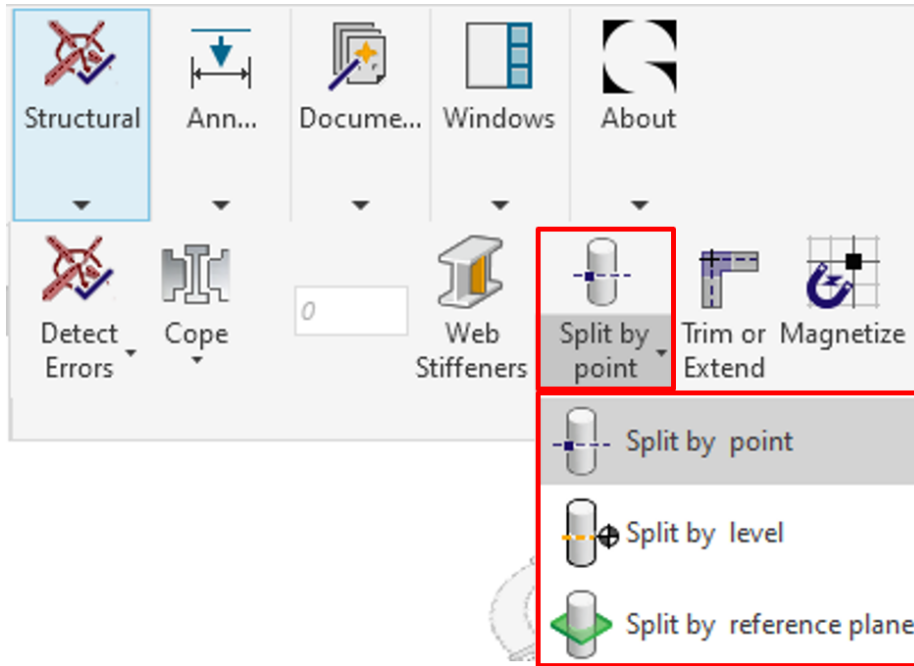


Notching distance

Notes: Revit has a specific tolerance level for coped beams that are less than 1 meter in length, which means that these beams will not be visible in the model.

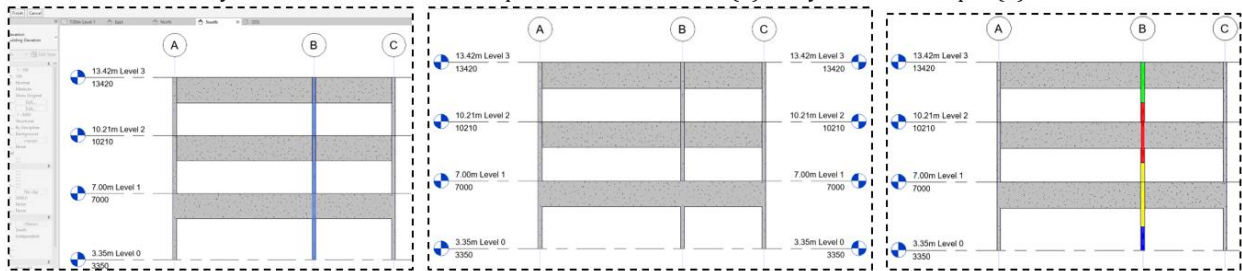
3.5. Split columns

Splitting columns provides you with greater flexibility in terms of modelling different types of structures. Users can split one or multiple structural or architectural columns with the new command **"Split Columns"**. There are three (3) ways of doing this.



Splitting by point:

Launch the command, then select the columns to split (1). After that click on the element on the points where you want the columns to be split and click on Finish (2). Get your columns split (3).



Step 1: Select columns to split and click finish



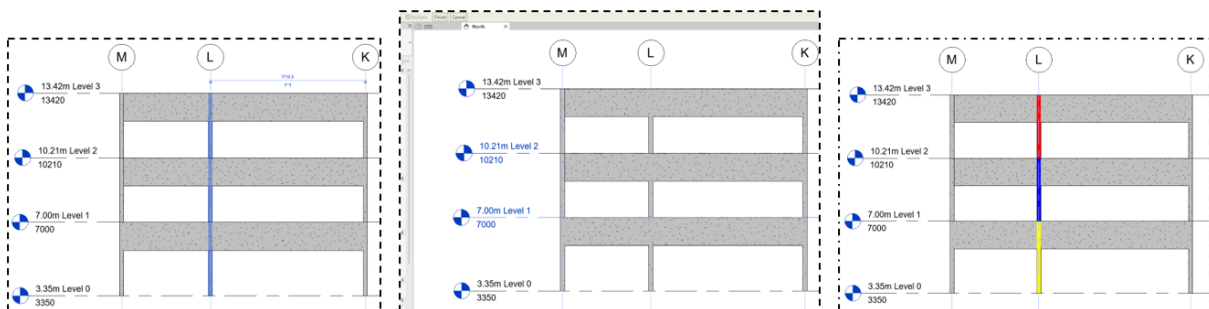
Step 2: Click on points on the columns and click finish



Step 3: Get columns split

Splitting by level:

Launch the command, then select the columns to split (1). After that select levels where you want the columns to be split and click on Finish (2). Get your columns split (3).



Step 1: Select columns to split and click finish



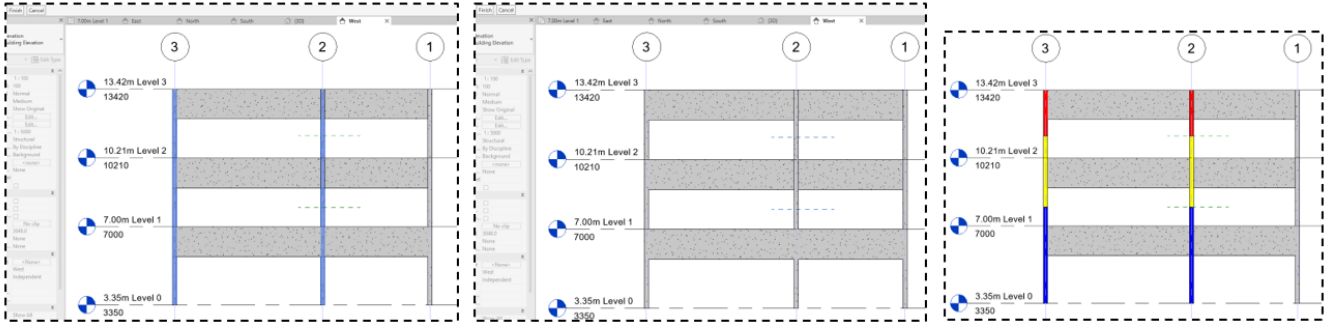
Step 2: Select levels and click finish



Step 3: Get columns split

- **Splitting by reference plane:**

Launch the command, then select the columns to split (1). After that select reference planes already placed where you want the columns to be split and click on Finish (2). Get your columns split (3).



Step 1: Select columns to split and click finish ➔

Step 2: Select references planes to split and click finish ➔

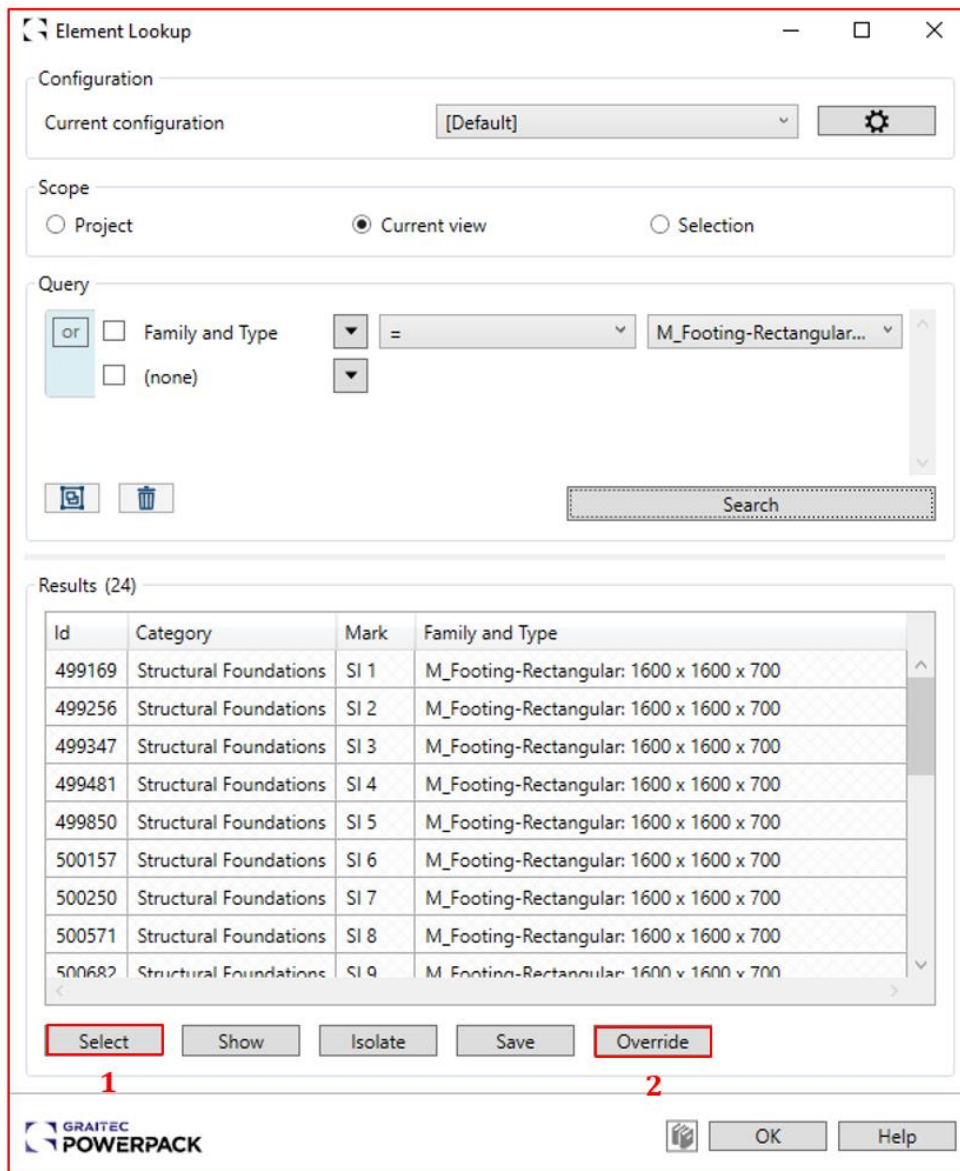
Step 3: Get columns split

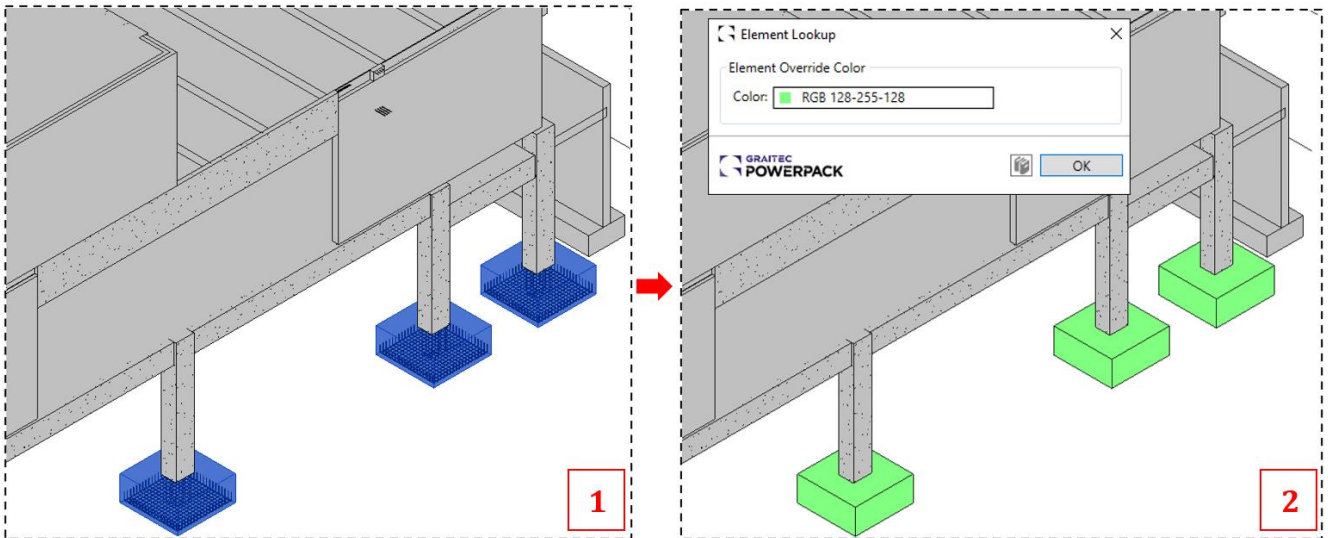
4. PowerPack for Revit

4.1. Element lookup UI enhancement

We have simplified the user interface of the "Element Lookup" command to enhance the user experience by making search more intuitive and by adding new options to it.

Override is a new option that helps users to highlight, with a color, searched element in their current workspace. You must click Select before overriding the elements.





Footing elements override color with green

4.2. Create Analytical Model on selection

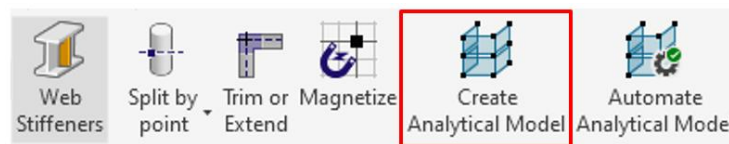
4.2.1. Functionality

Revit provides the functionality to generate an analytical model from an existing physical model that has already been created. Although this process involves using Dynamo scripts, it's taking time and requires several clicks and opening of windows. To address this issue, we have introduced a new command that enables the quick creation of an analytical model upon selection.

This command is now included in Powerpack for Revit 2023.1.1.

4.2.2. How to use the command

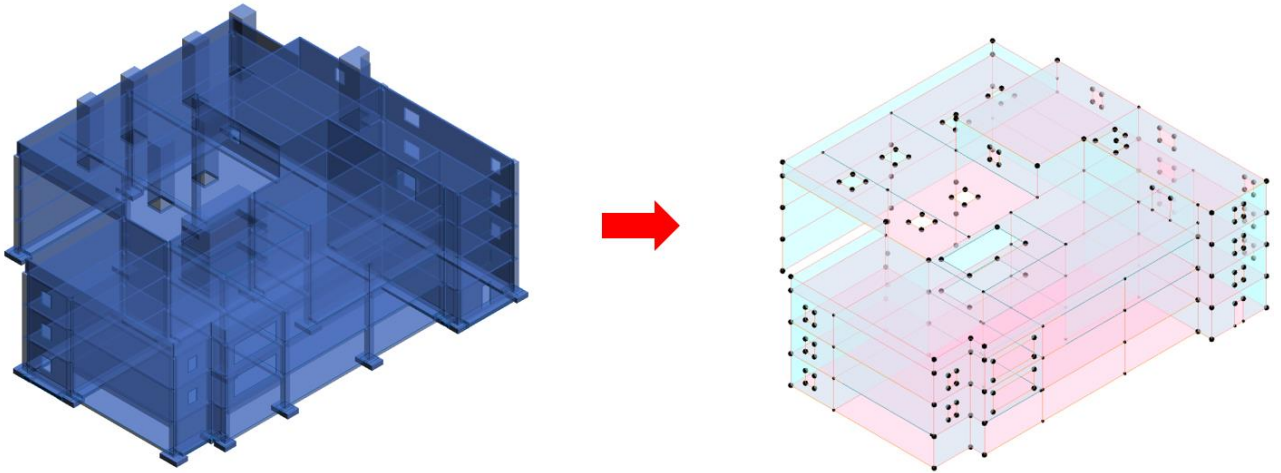
The tool is available in the **Powerpack Ribbon => Structural => Create Analytical Model**



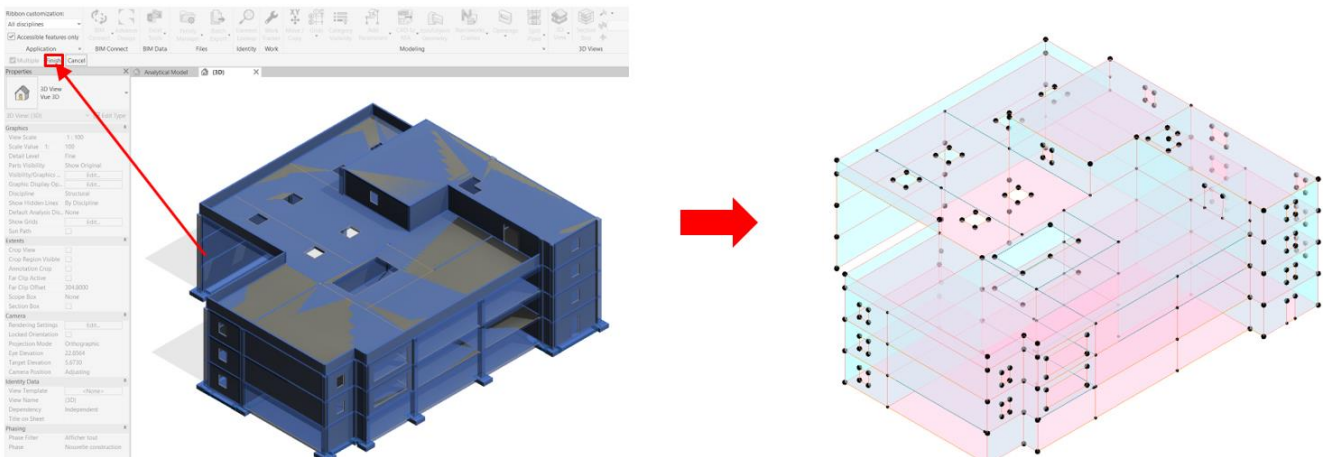
Command "Create Analytical Model" in Powerpack Ribbon

This tool is designed to generate analytical elements based on a selection of structural elements. To initiate the process, the user needs to click on the "Create Analytical Model" command and select the structural elements to be transformed into an analytical model. The tool will generate analytical members, panels, and openings for the selected structural elements. There are two different methods available for using this tool.

- **Method 1: Selecting elements => Click on “Create Analytical Model” command**



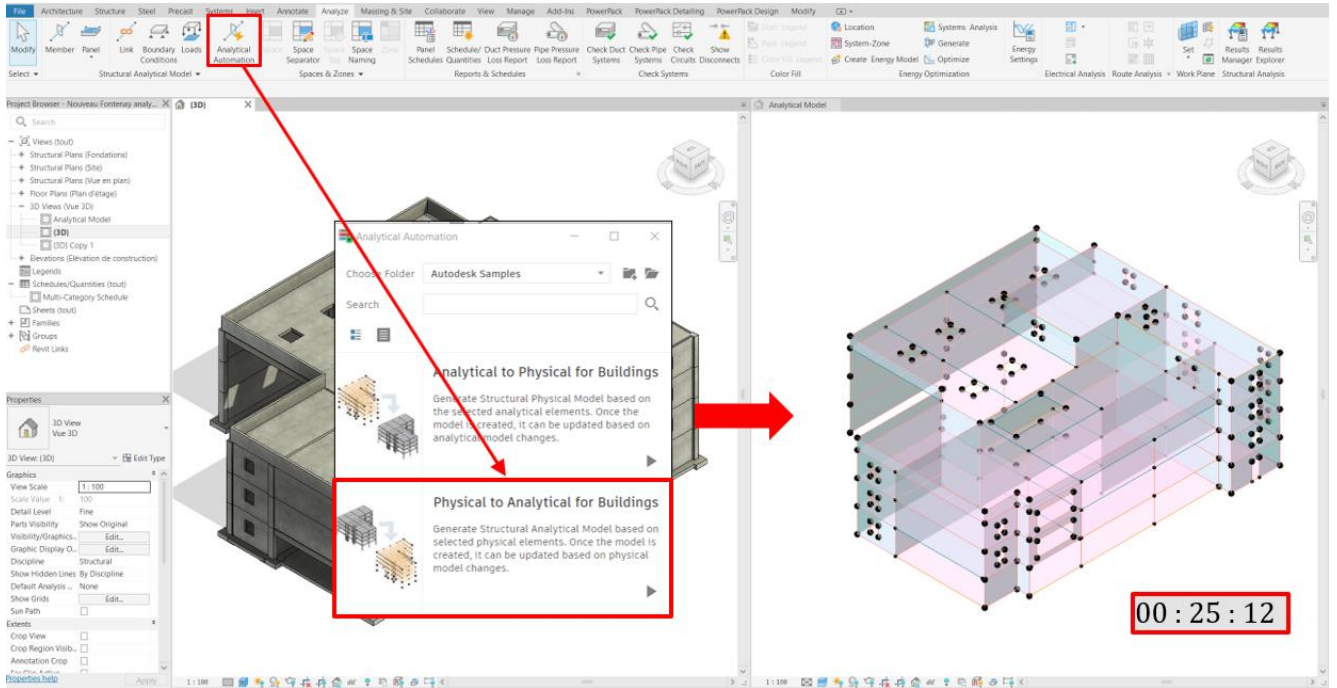
- **Method 2: Click on “Create Analytical Model” command => Selecting elements => Click on “Finish”**



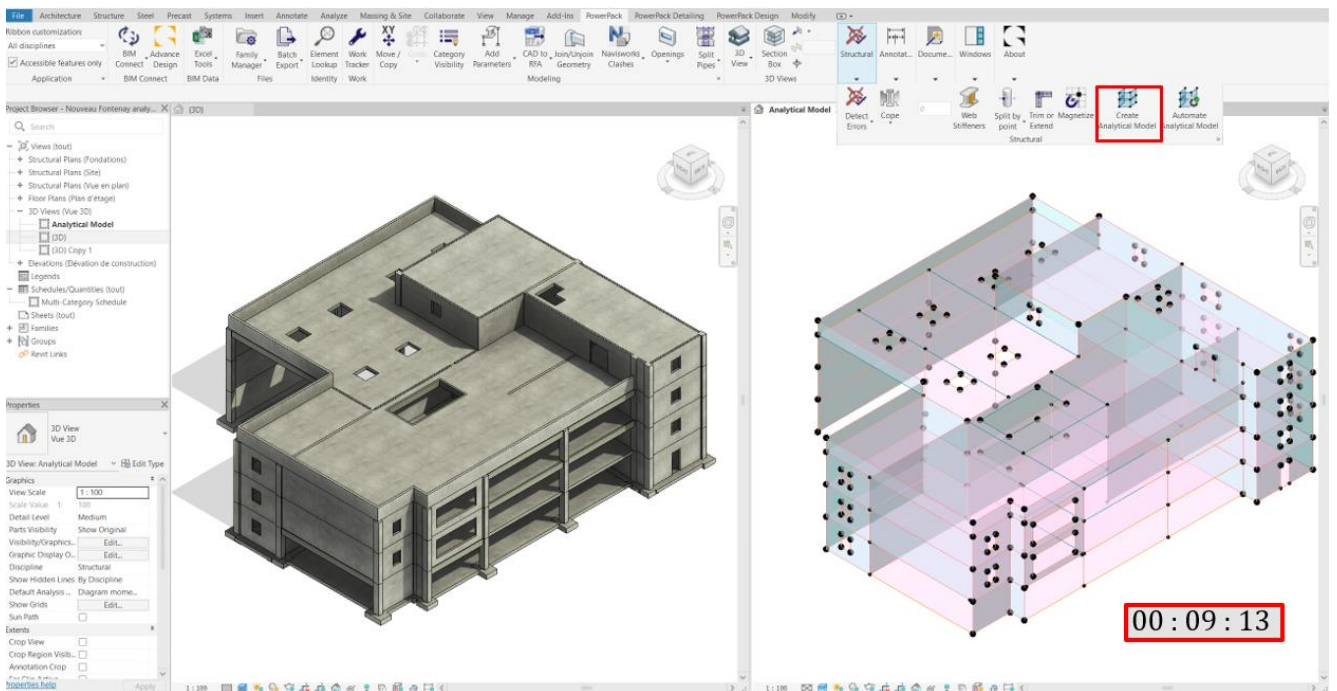
The analytical model will be **generated automatically** using one of the two methods. The result is an unconnected model on which users will have to make some modifications to connect the model using the Align option and others.

4.2.3. Benefits

This tool **speeds up** the process of creating an analytical model compared to the native Revit method by using Dynamo script in Revit. Our tool is 2 times faster than the Revit method. See the comparison below.



Duration of the process using Revit “Analytical Automation”



Duration of the process using PowerPack “Create Analytical Model”

4.3. Automate Analytical Model

4.3.1. Functionality

Graitec has developed a suite of tools aimed at simplifying the creation of analytical models for engineers using Revit. Some of these features were available in the Powerpack for Revit 2023.1.1, while others will be included in the upcoming major release, Powerpack for Revit 2024.

By using these tools, the process of generating analytical models from physical models is automated, resulting in a smoother and more efficient experience. Each tool incorporates unique features, including automated addition and linking of analytical elements to newly created structural elements, while preserving their physical characteristics.

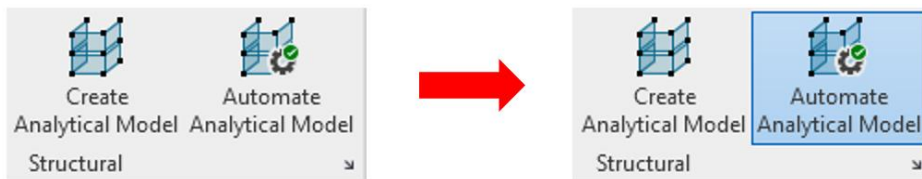
These tools provide our users with a comprehensive set of features for the creation of analytical models, and we are excited to continue enhancing and expanding our offerings in future releases.

4.3.2. How to use the command

The tool is available in the **Powerpack Ribbon => Structural => Automate Analytical Model**



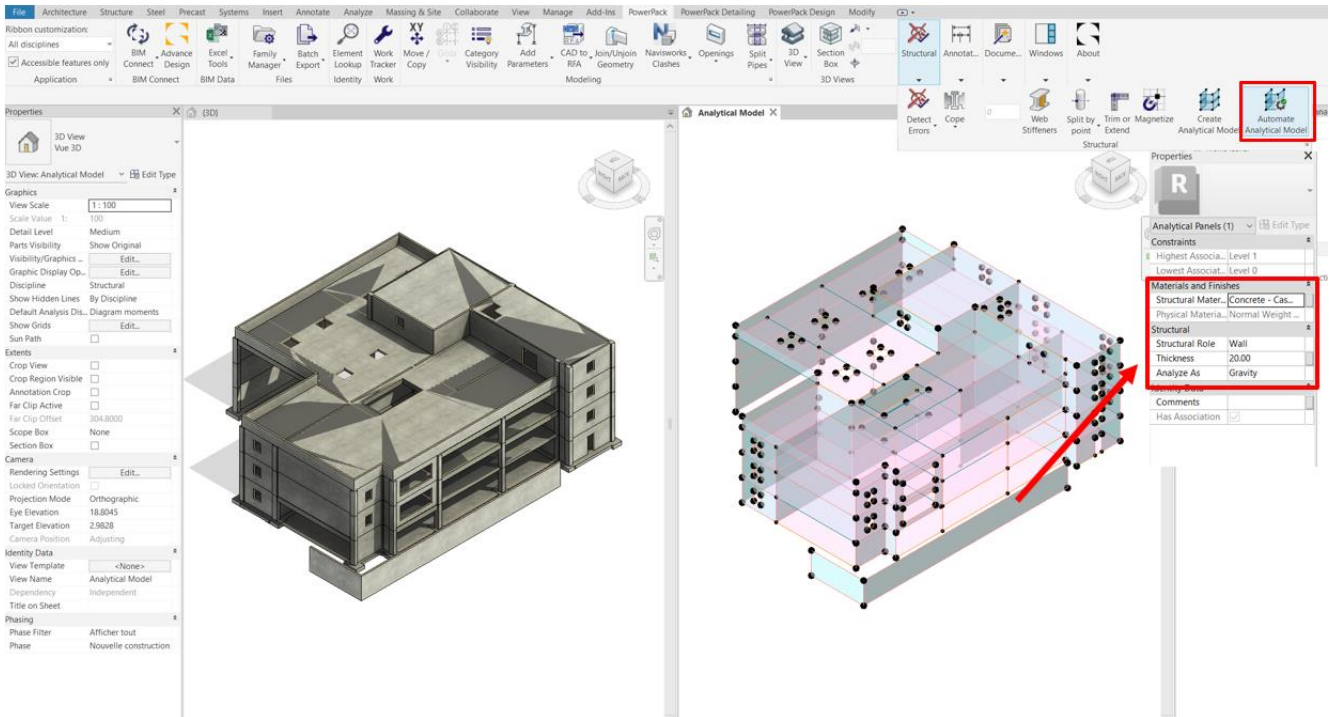
The button highlighted means that the command is activated.



Command activation

Once the command is activated, all the information of newly created physical elements will automatically be updated to their analytical elements. Furthermore, any changes made to the physical model will automatically update the analytical model:

- Creating structural elements
- Moving structural elements
- Adding openings



Information on the analytical elements is automatically updated

This method of creating analytical members and panels is different from using Revit's "structural analytical model" tools, as it eliminates the need for users to redefine the material or structural role. By doing so, it saves time, and is user-friendly, while also reducing the likelihood of errors.

While the command is active, all the structural elements that are created will be added to the analytical model. To prevent any further addition, the user needs to deactivate the command by clicking on "Automate Analytical Model." The highlighted button indicates that the command is currently activated.



Deactivate the command

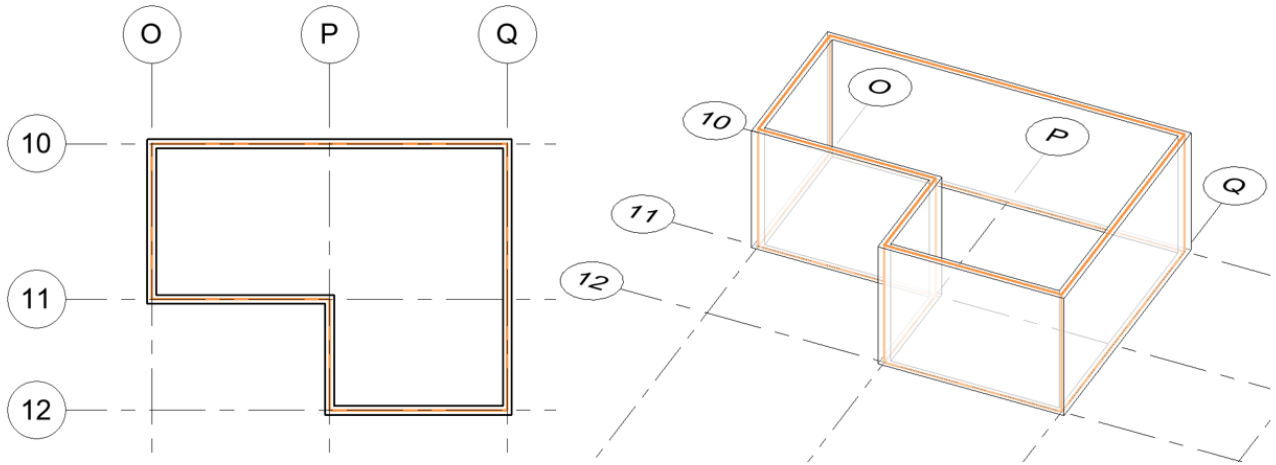
4.4. Analytical Assumptions

When utilizing the "Create Analytical Model" command, the geometric properties and material specifications are retained, and the analytical model is linked to its corresponding structural model. Nevertheless, it does not update automatically with the structural model. This means that changes made to one model will not automatically reflect in the other. Similarly, elements added after executing the command will not be automatically included in the analytical model.

It is important to note that when the "Automate Analytical Model" command is active, all elements created during this period are interconnected

4.4.1. Walls

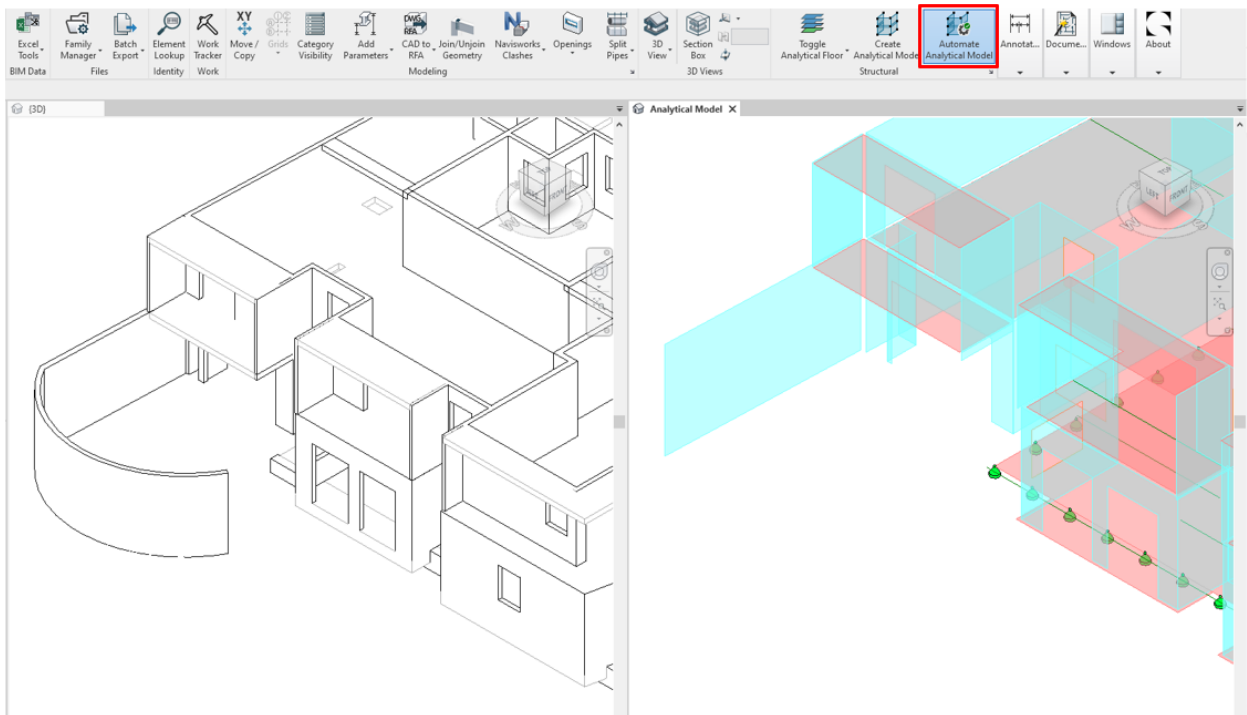
Walls created by both commands are converted to an analytical panel at the axis/centreline of the wall.



Walls assumption

4.4.2. Curved Walls

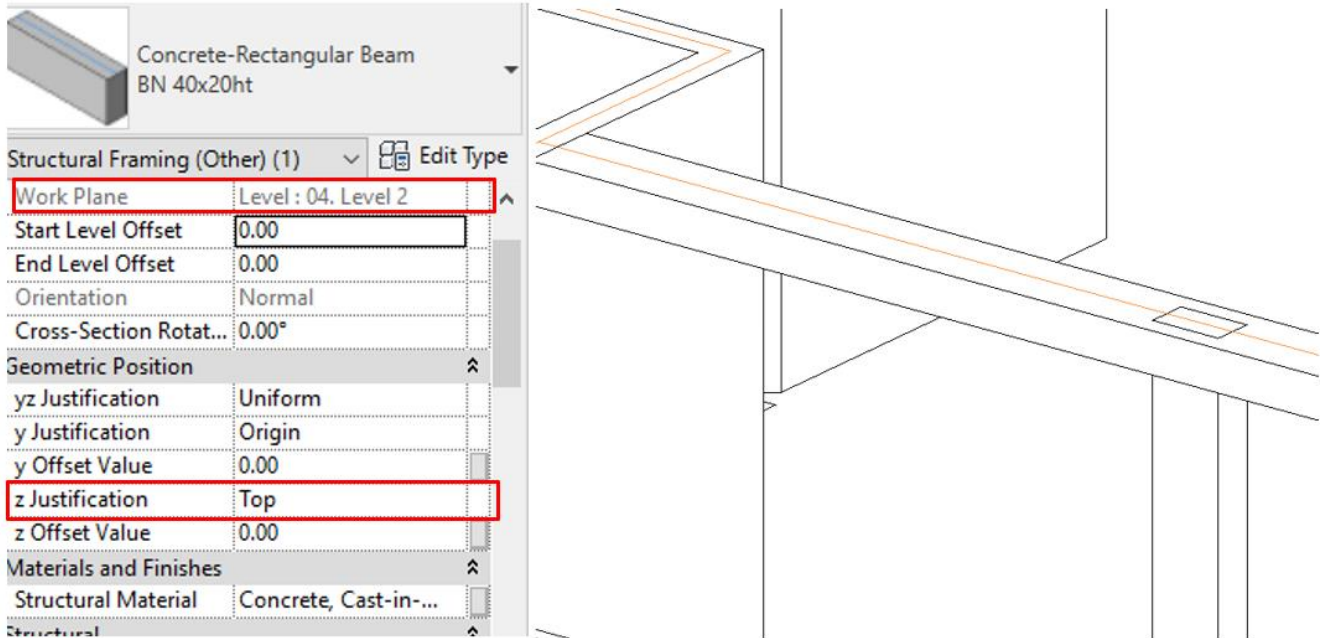
Curved walls are currently not supported.



Curved walls assumption

4.4.3. Beams

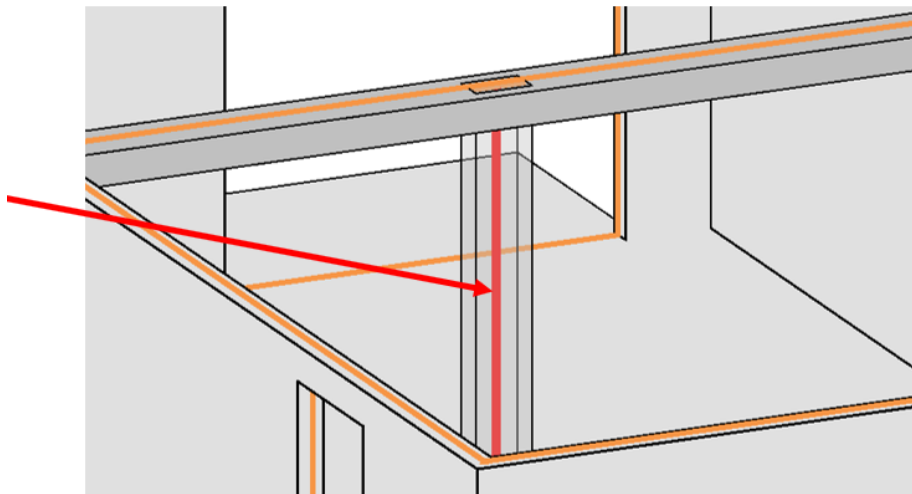
Beams are converted to an analytical member according to the “z justification” point chosen at the level where they are placed. Users can change the “z justification of the beam”.



Beams assumption

4.4.4. Columns

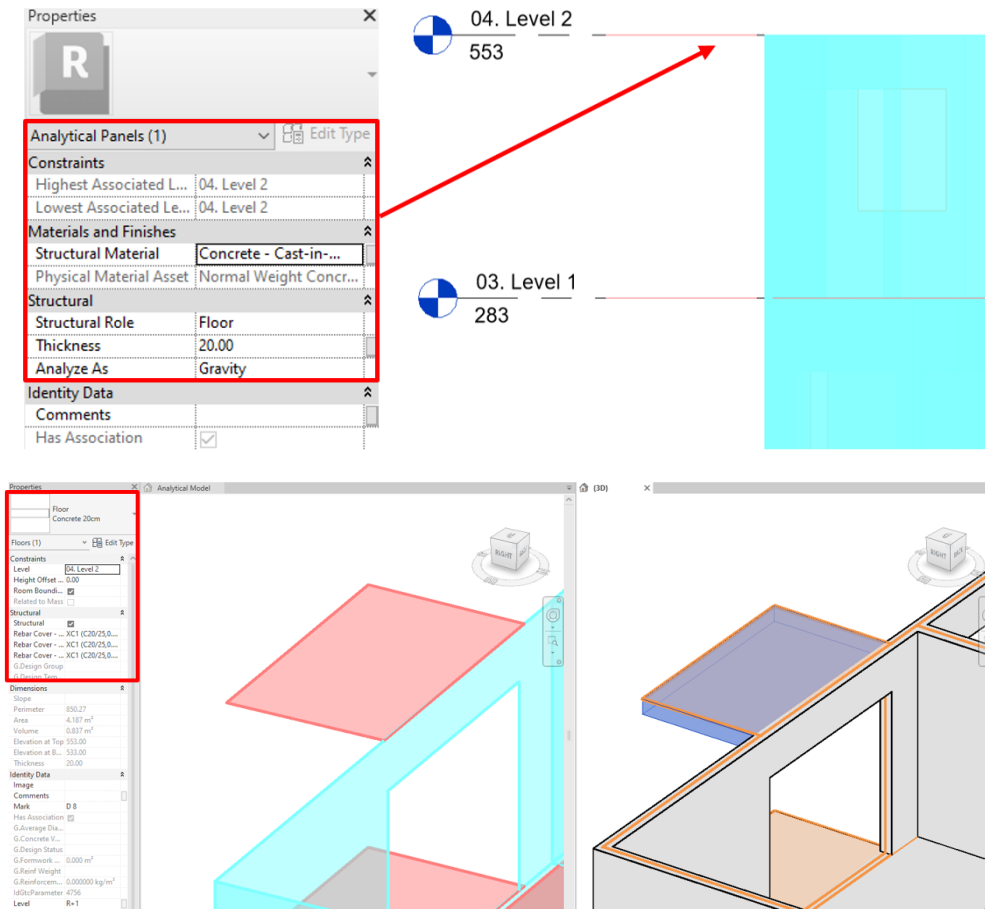
Columns are converted automatically to an analytical member at the level where they are placed. The analytical member is at the center of the element.



Columns assumption

4.4.5. Slabs/floors

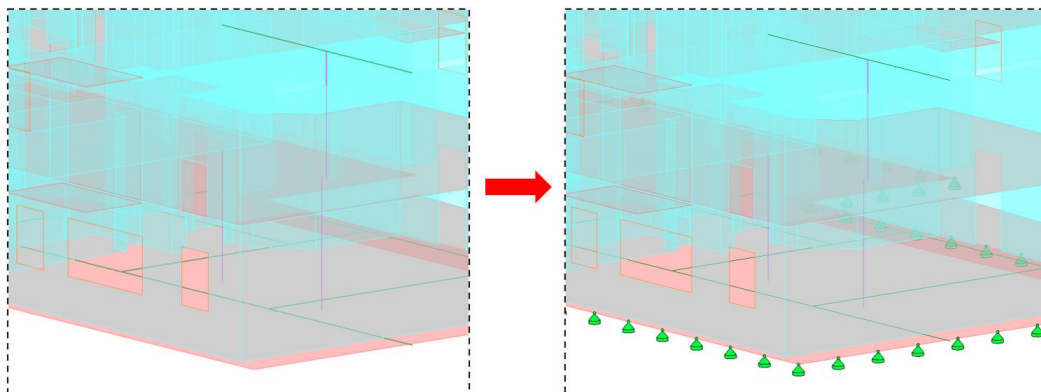
Slabs/floors are converted automatically to an analytical panel at the level where they are placed.



Slabs assumption

4.4.6. Footings

Footings are not supported by these commands. Users need to set them through the Revit boundary conditions tools.

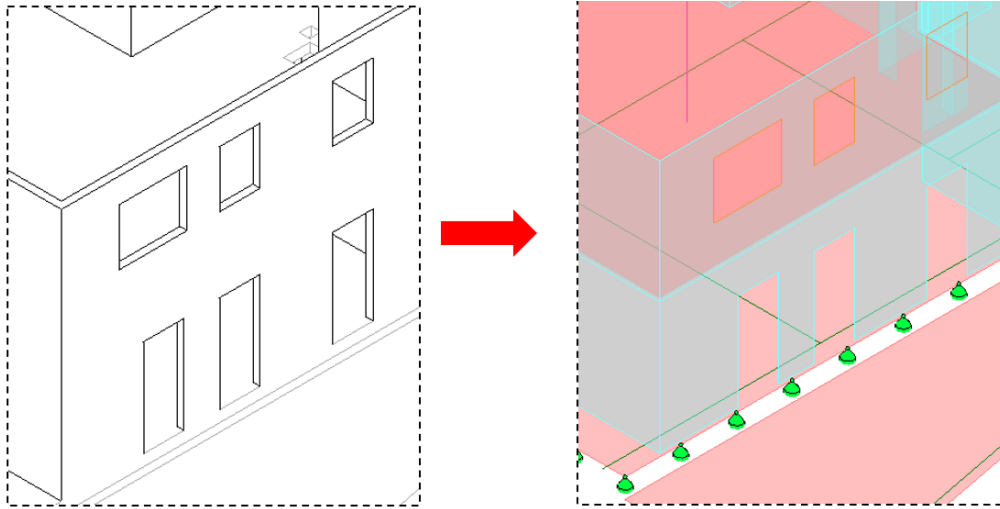


Footings assumption

4.4.7. Openings

4.4.7.1. Using “Create Analytical Model”

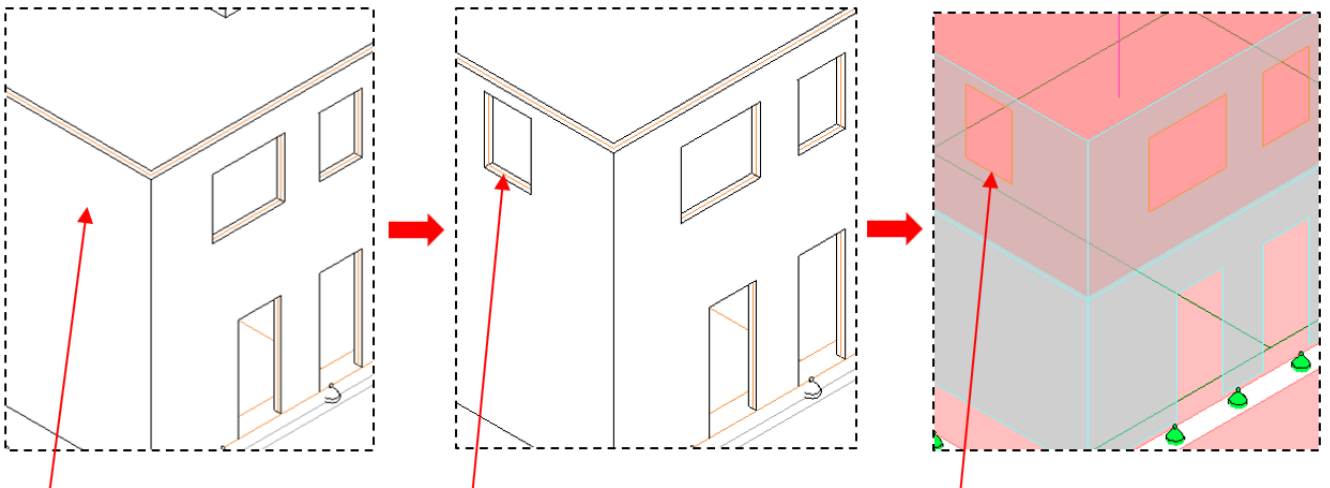
All openings in the physical model are realized when using this command. By face, shaft, wall, vertical, family openings, windows, and door openings are all supported.



Openings are supported using “Create Analytical Model”

4.4.7.2. Using “Automate Analytical Model”

Adding openings (By face, shaft, wall, vertical, windows, and door openings) to the physical model is updated automatically on the analytical model.



Openings are supported using “Automate Analytical Model”

4.4.7.3. Exporting

It is important to note that openings are default. They cannot be deleted when exporting to the modules as in the old versions.

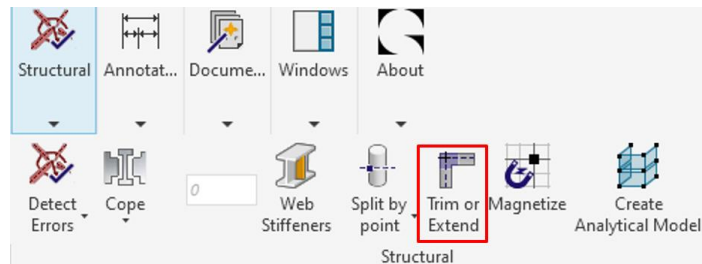
4.5. Trim or Extend

4.5.1. Functionality

'Trim or Extend' is a new tool that helps when **creating analytical models** in Revit. With this tool, users can **adjust analytical models** to match the target analytical model by trimming or extending them. In Revit you can use the Align tool, but only for perpendicular analytical elements. There is no tool in Revit for adjusting analytical models, so using **Trim or Extend** eliminates the need for a manual displacement of nodes.

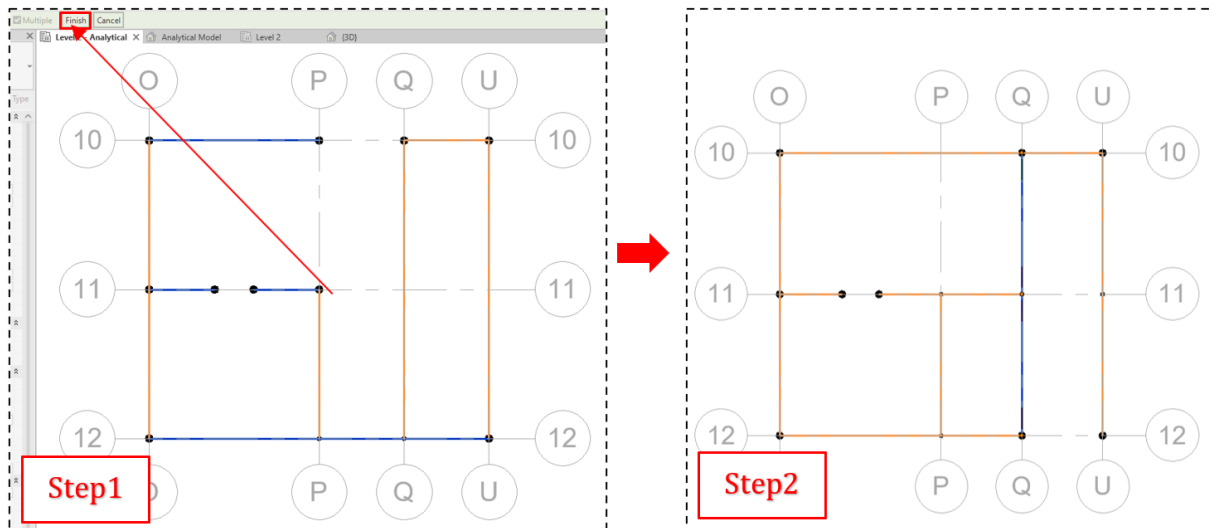
4.5.2. How to use the command

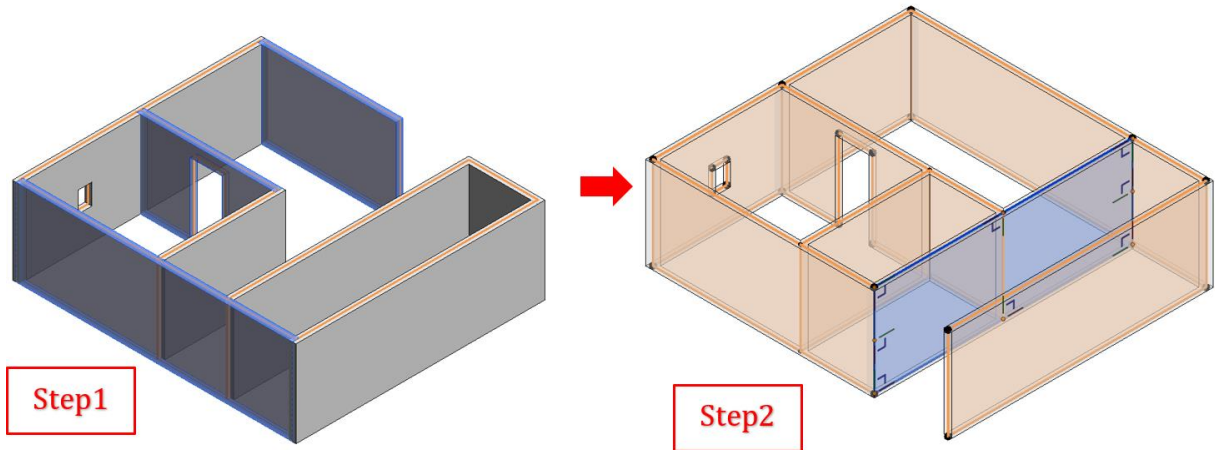
The tool is available in the **Powerpack Ribbon => Structural => Trim or Extend**



Step 1: After selecting this command, a user needs to select elements to trim or extend. Users can select multiple elements to Trim and Extend at the same time and click on "Finish".

Step 2: Then the user must select the reference element which should be the boundary.



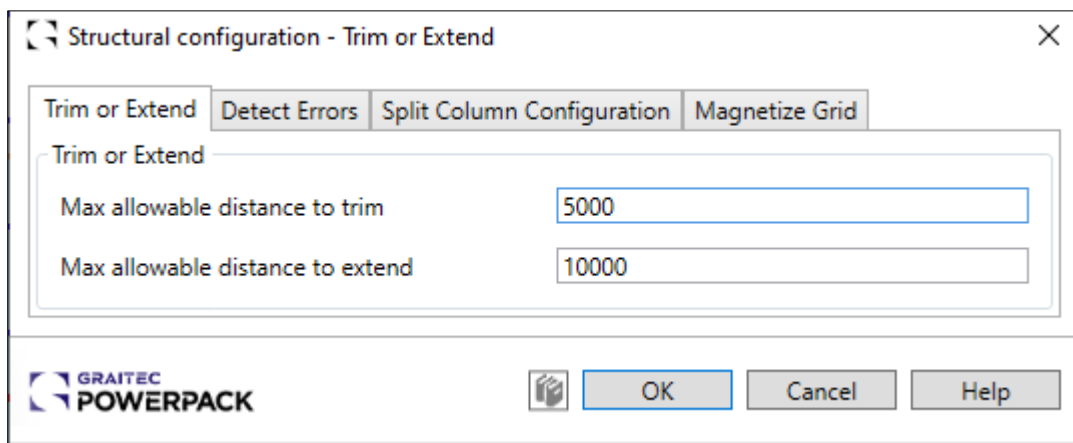


How to use "Trim or Extend"

Notes:

If "Trim or Extend" command doesn't function, please check distance tolerance as follows:

You can manage the distance tolerances for both the Trim or Extend options in the Structural settings Panel.



Trim or Extend setting interface

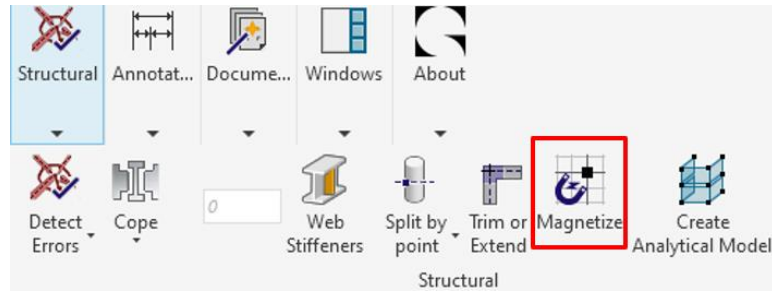
4.6. Magnetize

4.6.1. Functionality

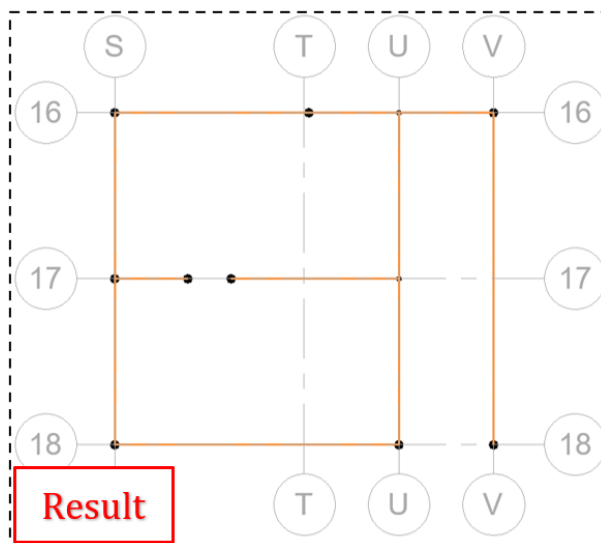
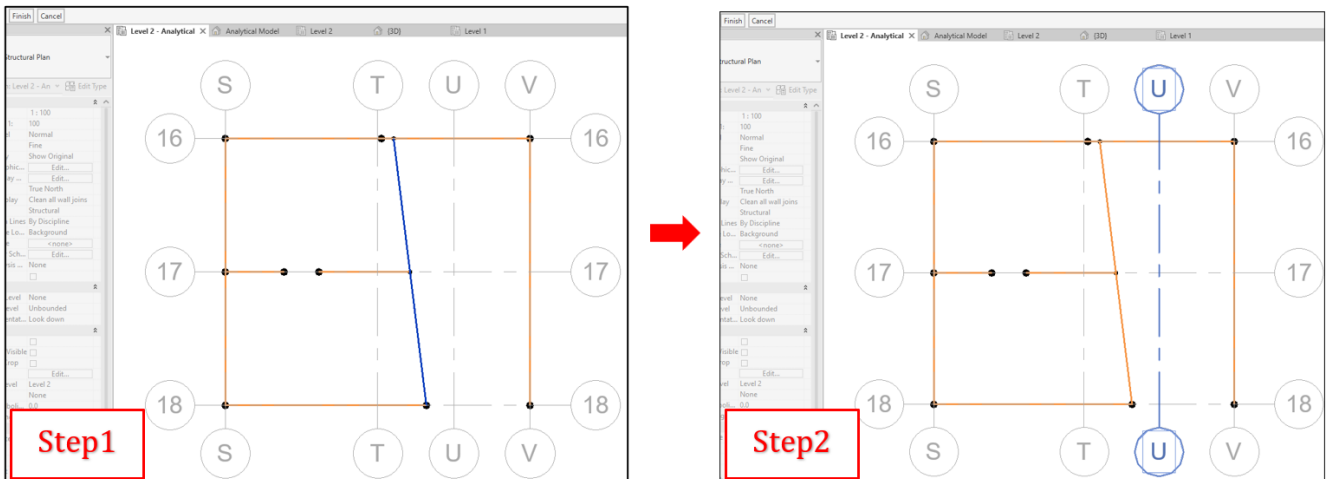
Using the "Align" option of Revit on analytical models especially surfaces doesn't work well. The command '**Magnetize**' helps to align analytical elements to a grid, allowing the user to correct any flaws in the model by ensuring that objects are properly aligned.

4.6.2. How to use the command

The tool is available in the **Powerpack Ribbon => Structural => Magnetize**



1. After clicking on the command, the user has to select the elements the user wants to magnetize. Users can magnetize multiple elements at once.
2. Then, the user must select the grid to which the user wants the elements to be aligned.



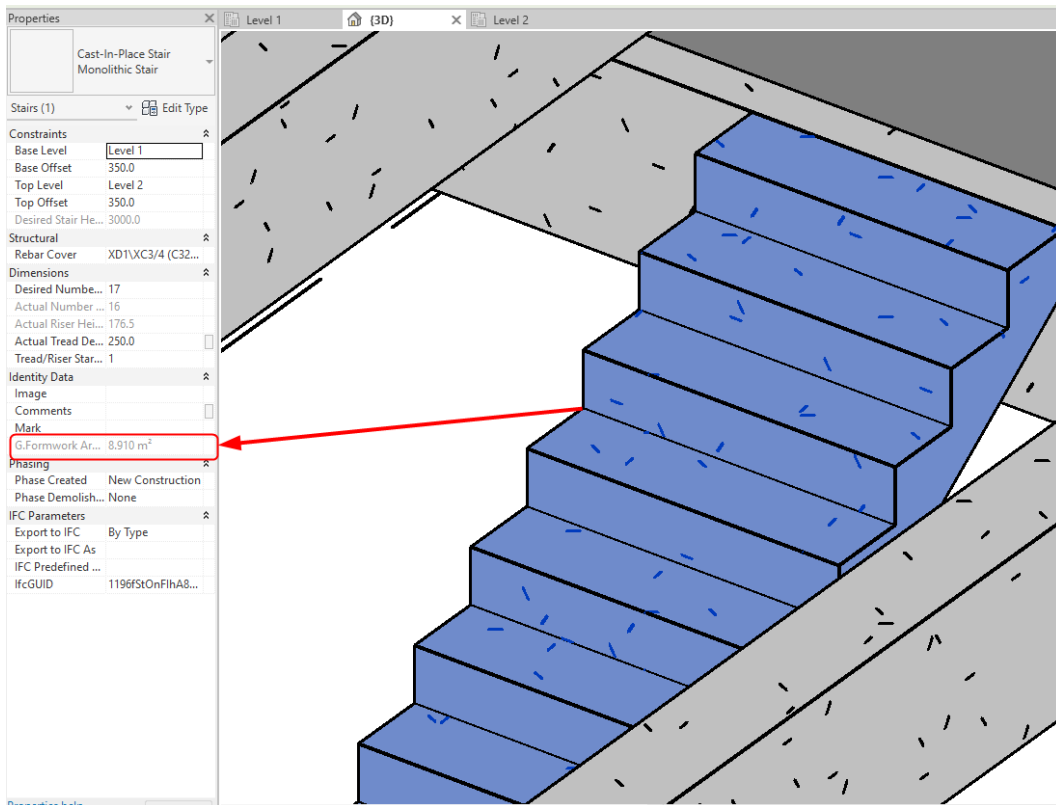
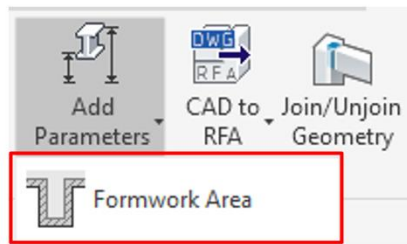
How to use command "Magnetize"

Notes:

The function “Magnetize” applies to all types of structural elements, structural walls, beams, and columns.

4.7. Formwork Area for stairs

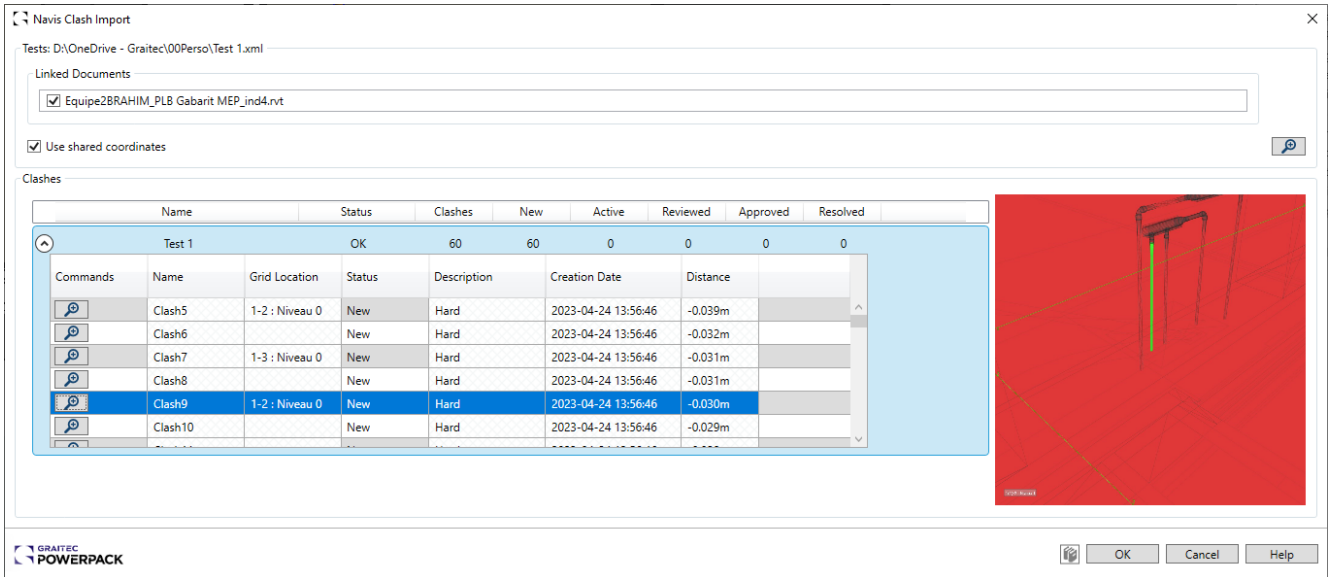
To ensure that the stairs are constructed safely, accurately, and with the desired shape and size, **Formwork Area** is now available for **stairs** on Powerpack. The calculation considers all the faces of the element minus the horizontal faces at the top side.



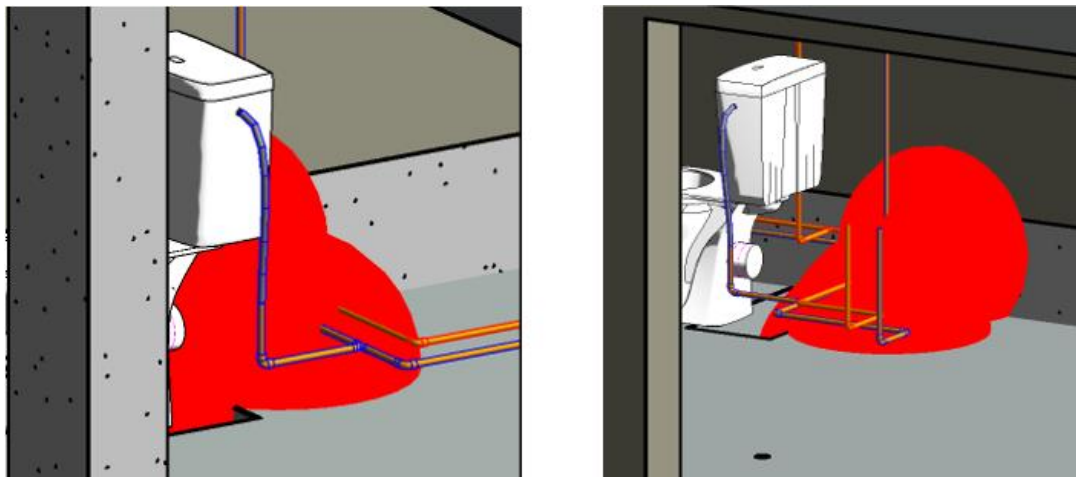
The stairs' formwork area is calculated

4.8. Navisworks Clash: Interacting with the view

Users now have the ability to actively engage with the view. With this feature, you can actually play around with the view to get a better look at the clash. It lets you zoom in and out and move around so you can really see what's going on. By having this hands-on approach, it's easier to catch any problems and fix them quickly, which saves time and makes things smoother.



Navisworks Clash import

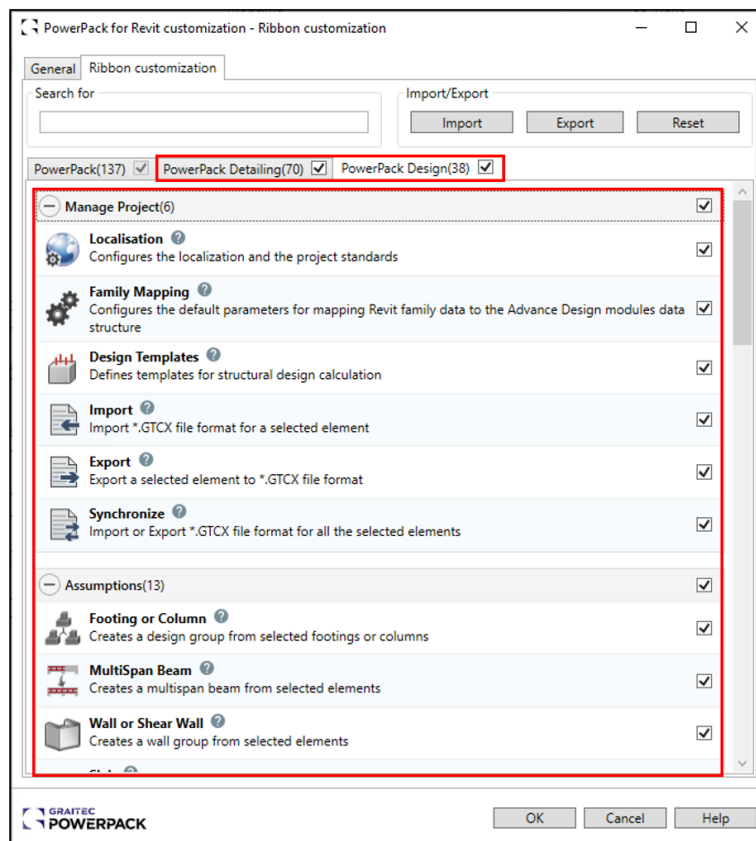


Clashes are illustrated and encircled in red

5. PowerPack for Revit + Rebar Design & Detailing

5.1. Ribbon customization

In **Ribbon customization** dialog in PowerPack ribbon, **Detailing** and **Design** now get their ribbons. With the possibility to enable or disable ribbons panels and each command.

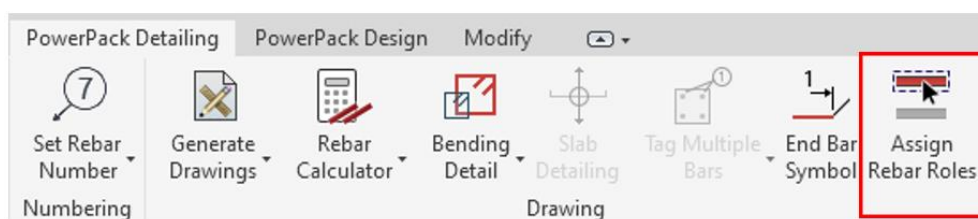


Ribbon customization

5.2. Assign Rebar Roles

5.2.1. Functionality

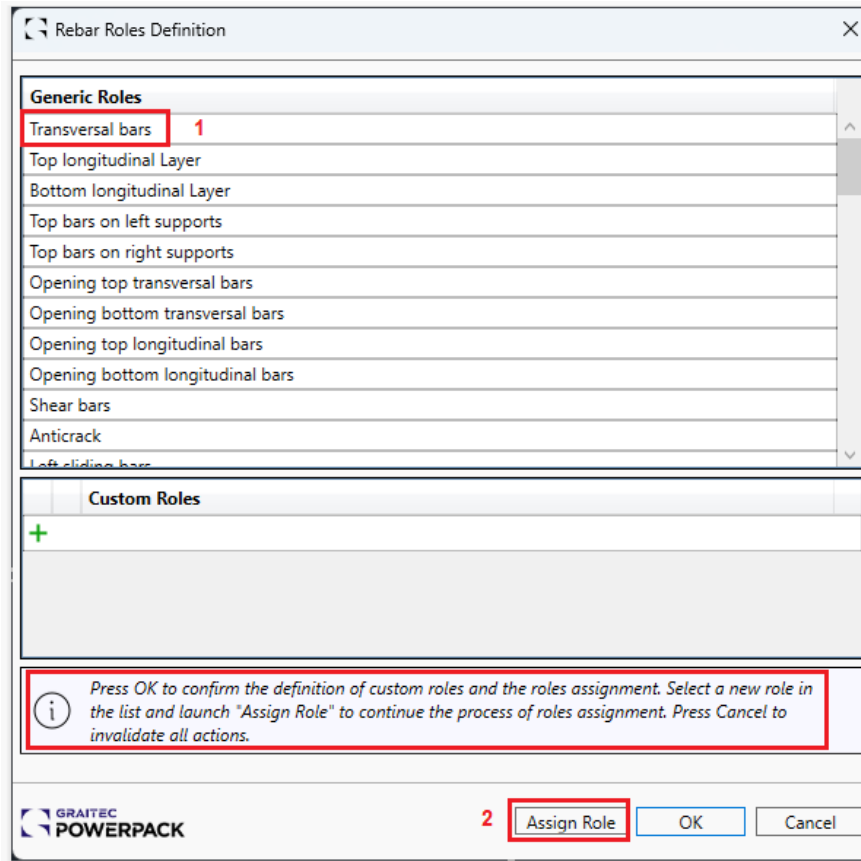
“**Assign Rebar Roles**” is a new command in **Powerpack Detailing** to assign specific rebar roles to already reinforced elements in Revit. That will help the user in the process to check any rebar cage made in the model.



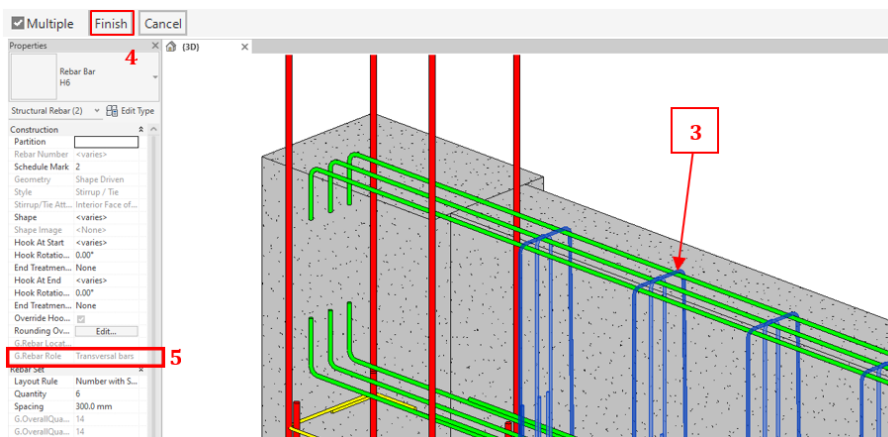
Users can assign multiple roles to the bars that are in the model with our Generic roles that cover a lot of roles.

5.2.2. How to use the command

After clicking the command, users can choose **'Rebar Role'** (1) and click **Assign Role tab** (2). Then users can select the element they wish to assign it to (3) and click the Finish tab (4). The Rebar role information is now available in properties. (5).

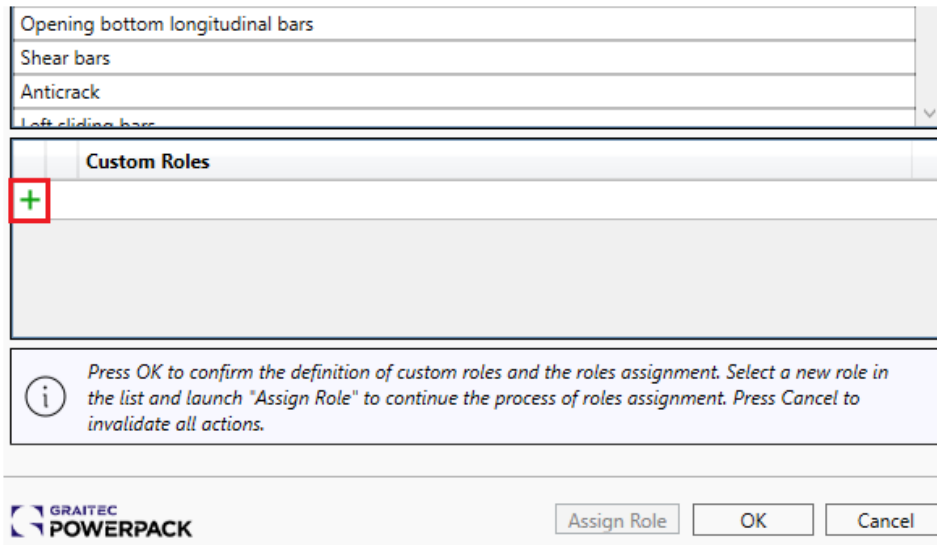


Rebar role definition



How to use command "Assign Rebar Role"

But users can create their own **custom rebar roles**. For that, they need to click on the "+" in the Custom Roles group. Once the user adds a custom role, he can rename it to define the role. Custom roles can also be duplicated by clicking on the "+".



Add custom rebar roles

5.3. Clone Drawings

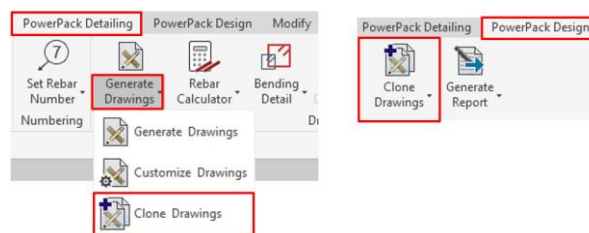
To enhance the efficiency of drawing creation, we have introduced a feature that enables quick multiplication of drawings. This functionality will find a link between views and structural elements, then it will automatically assign roles to existing rebars based on their shape and position relative to the element, then it will find and organize all annotation elements that are dependent on the element or to the rebar hosted by the element.

With all this information the tool will recreate the views and the annotation elements to a new element of the same category regardless of its different shape or hosted rebar cage by finding similarities between the template element and the target elements.

The tool is designed to work in a “many-to-many” relationship between elements, which means that the user can clone drawings between multi-span beams or multi-level columns.

By using the clone drawings feature, a substantial amount of time is saved during the process of creating drawings for structural elements, as it automatically generates near-completion drawings that would otherwise need to be created manually.

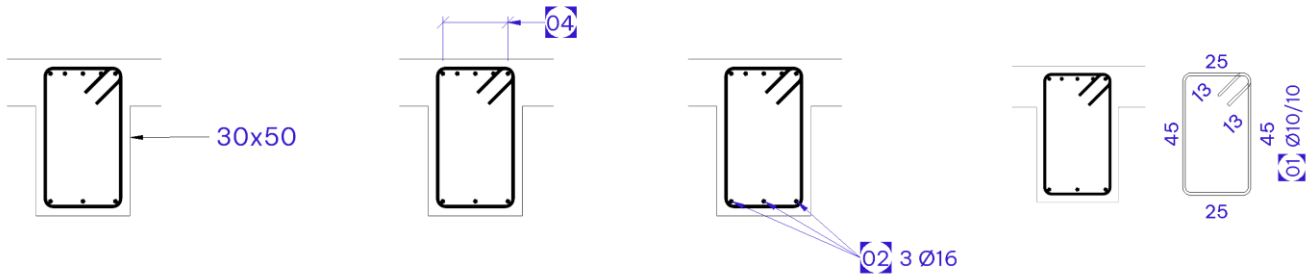
The button is present in the **Detailing Ribbon** and **Design Ribbon**.



5.3.1 Assumptions

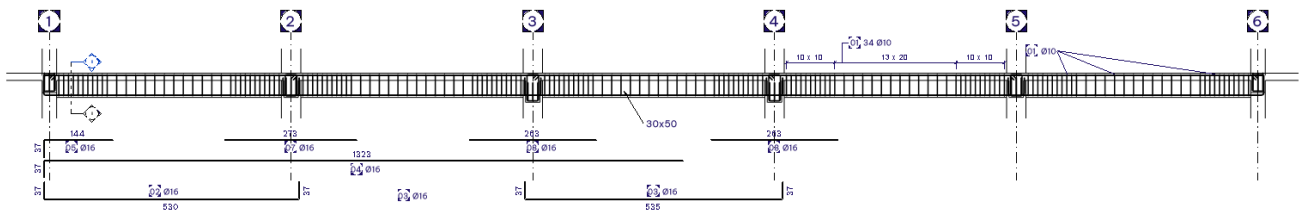
For a view to be linked to the element, the view needs to contain at least one of the following:

- Tag on the element
- Tag on a rebar hosted by the element
- Multi-rebar annotation on a rebar hosted by the element
- Bending detail (from Powerpack or from Revit)



Examples of views that will be linked to element

For a view to be linked to a group of éléments (multi-span beams or multi-level columns), all elements need to follow one of the rules already specified.



Example of a view that will be linked to a group of elements

After linking the views to the element, the tool will automatically assign roles to the rebars hosted by the element based on their shape and position relative to the element.



Example of automatically assigned rebar roles

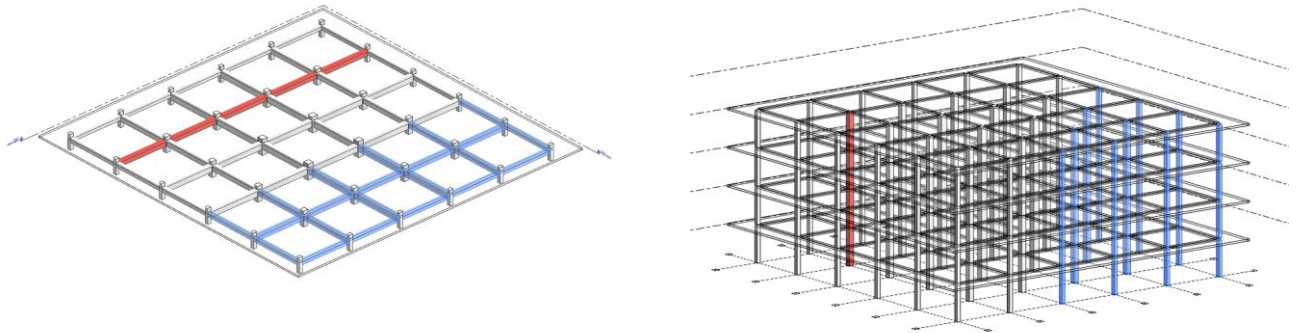
After assigning the roles, the tool will search for all annotation elements (tags, MRAs, dimensions, bending details) placed on the views and will correlate them with rebars based on their rebar role.

5.3.3 Running the tool

After running the tool, the user needs to select the template element. If the element is detailed in view as part of a group, as mentioned before, the whole group will be selected. The template element/group will be highlighted and will not be available for selection as a target element. If there is no view linked to the template element, a warning will appear.

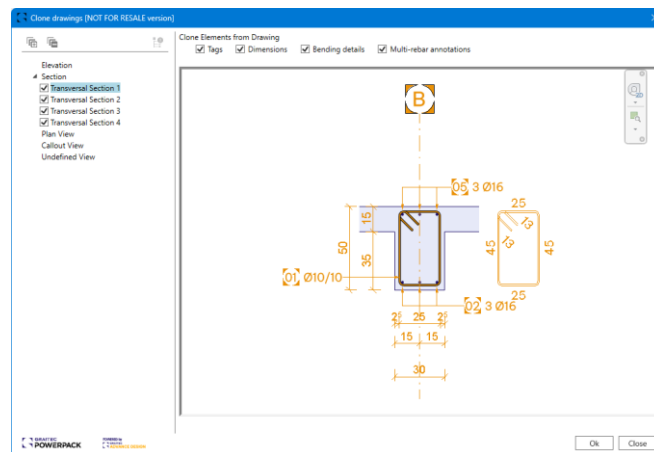
After selecting the template element, the user can select other elements of the same category.

If the user selects multiple target elements, those elements will be also grouped based on grouping algorithms.



Highlight of the template group and selection of target elements

After the selection is made, a dialog will appear where the user will find a list of all the views linked to the template element/group. He will be able to choose what views will be cloned. Additionally, the user will be able to choose the specific elements he wants to incorporate into his drawings like tags, dimensions, MRAs, or bending details. According to his options, the preview will be updated so the user will get a live representation of the future to-be drawing.



Clone drawings dialog

As a result, the linked views of the template element are cloned on the target elements, providing users with a cohesive and streamlined visual representation of their drawings.

5.3.5 Tips&Tricks for best results

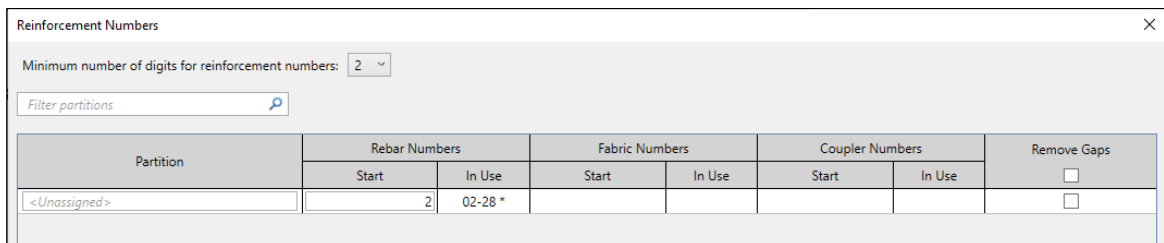
- The tool is cloning annotation elements based on the rebar's role. Thus, all rebars with the same role will be detailed the same. For more specific detailing, the user can assign more rebar roles. The rebar roles will be preserved upon using rebar propagation
- All plans/views will be cloned. For the best runtime, always check the list of linked views so the tool will not clone unnecessary views (Plans especially will take a longer time to clone)
- Dimensions will be best cloned if their references are placed to the faces of elements and not references of hosted elements (Example: Walls that are hosting door/windows. Check the references when placing the dimensions)
- Dimensions will keep account also for nested families

5.3.6 Known limitations

- Currently, groups are available only for beams and columns
- Some dimension references will not be cloned properly (Revit limitation)
- Currently, no symbols will be cloned
- Grids will preserve their adjusted length and position (Revit limitation)

5.4. Automatic Partition Numbering

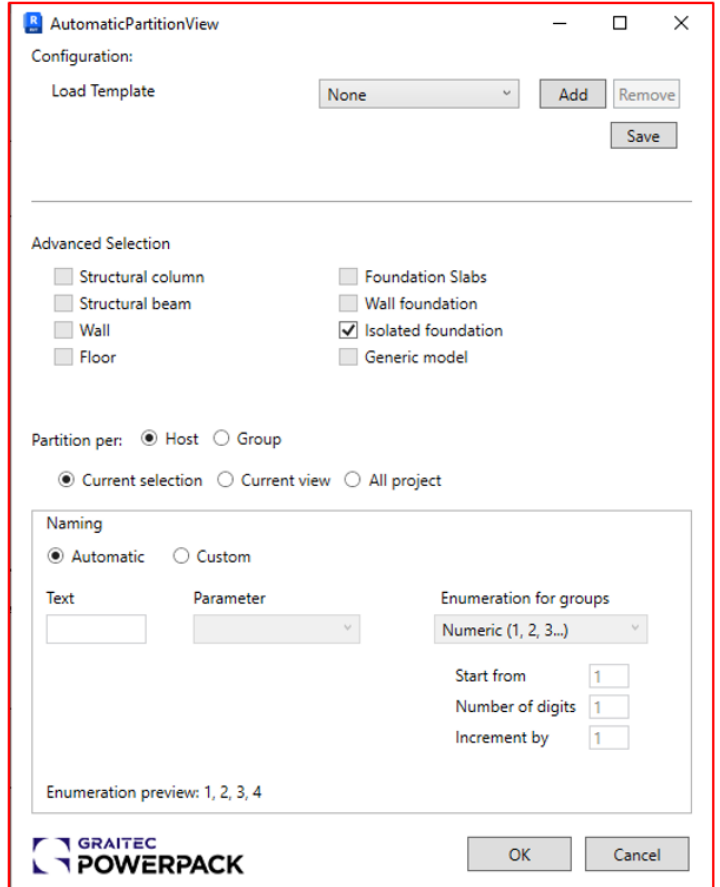
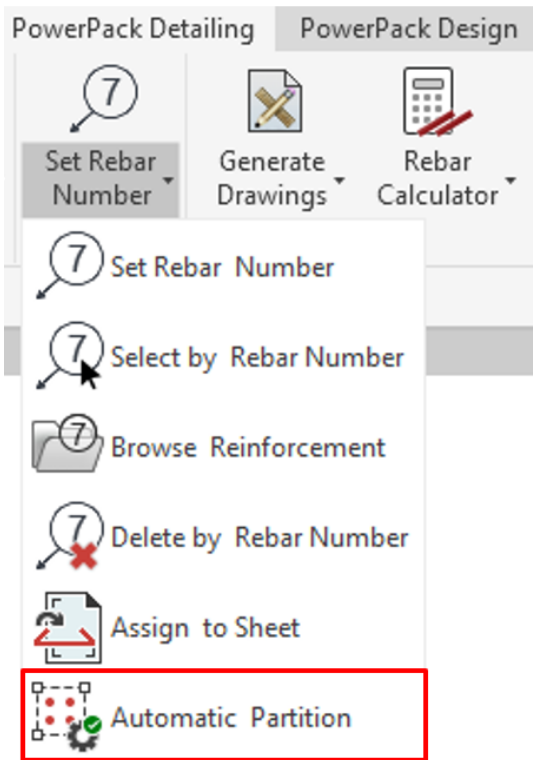
Currently, Revit allows users to **automatically assign numbers** to reinforcement following construction sequences. Each sequence is defined as a partition. Rebar numbers within the same partition are created based on the rebar type, shape & geometrical parameters.



Reinforcement numbers window

Partitions must be created or assigned manually on reinforcement elements with Revit. So, it can be tedious if the user needs to define several of them (e.g.: for each structural host in a big project). Instead, Revit leaves available the graphical programming interface “Dynamo” to do this automatically. This can be complex for Revit users who do not need to use it frequently.

Our new feature called **“Automatic Partition”** makes this process automatic in Revit and is now available. Users get rebar partitions for each structural element selected.



Automatic partition in Powerpack

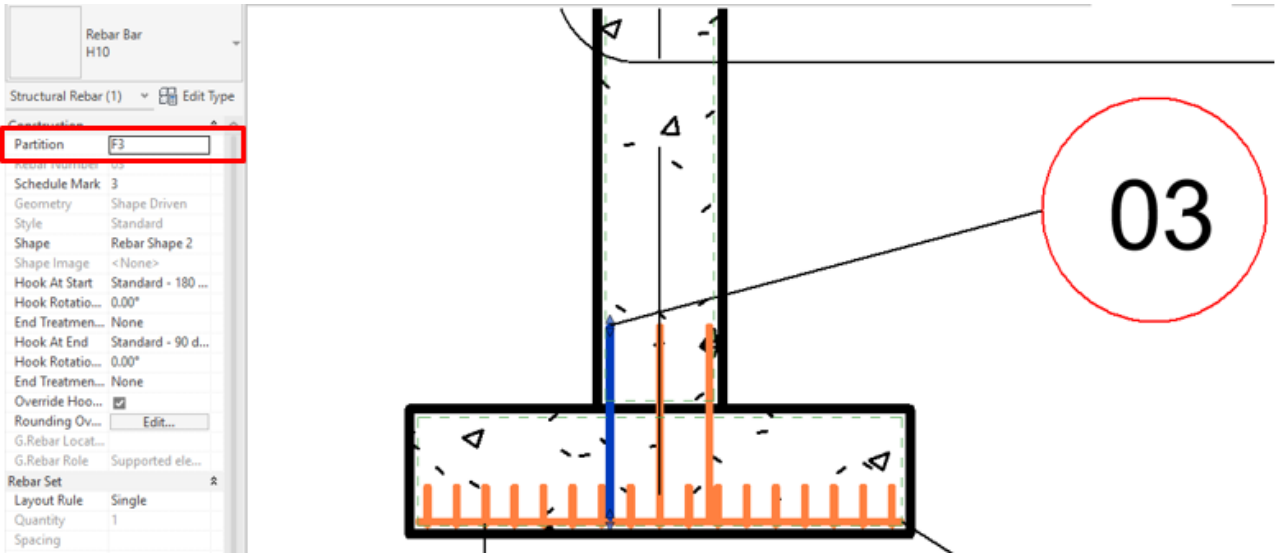
Reinforcement Numbers

Minimum number of digits for reinforcement numbers: 2

Filter partitions

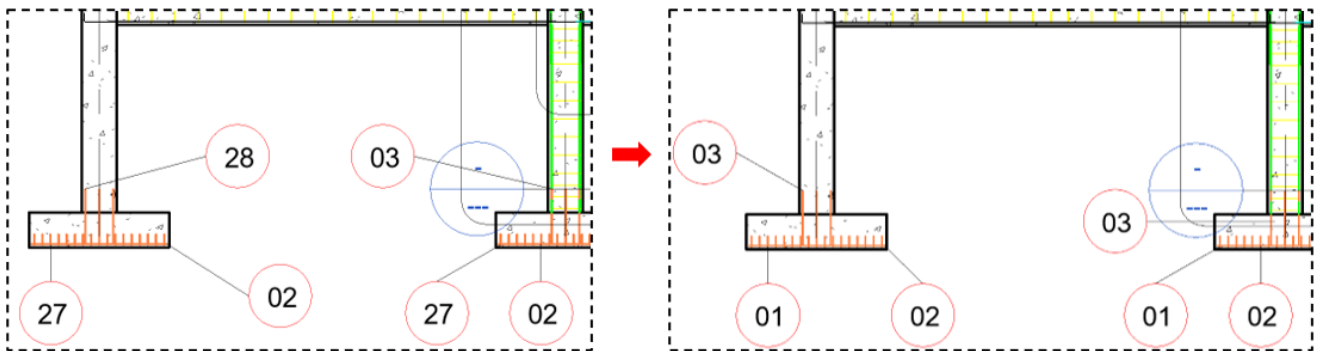
Partition	Rebar Numbers		Fabric Numbers		Coupler Numbers		Remove Gaps
	Start	In Use	Start	In Use	Start	In Use	
<Unassigned>		2, 02-26 *					<input type="checkbox"/>
F2	1	01-03					<input type="checkbox"/>
F3	1	01-03					<input type="checkbox"/>

Reinforcement numbers with partitions made



Rebars in one footing foundation are automatically assigned to one partition

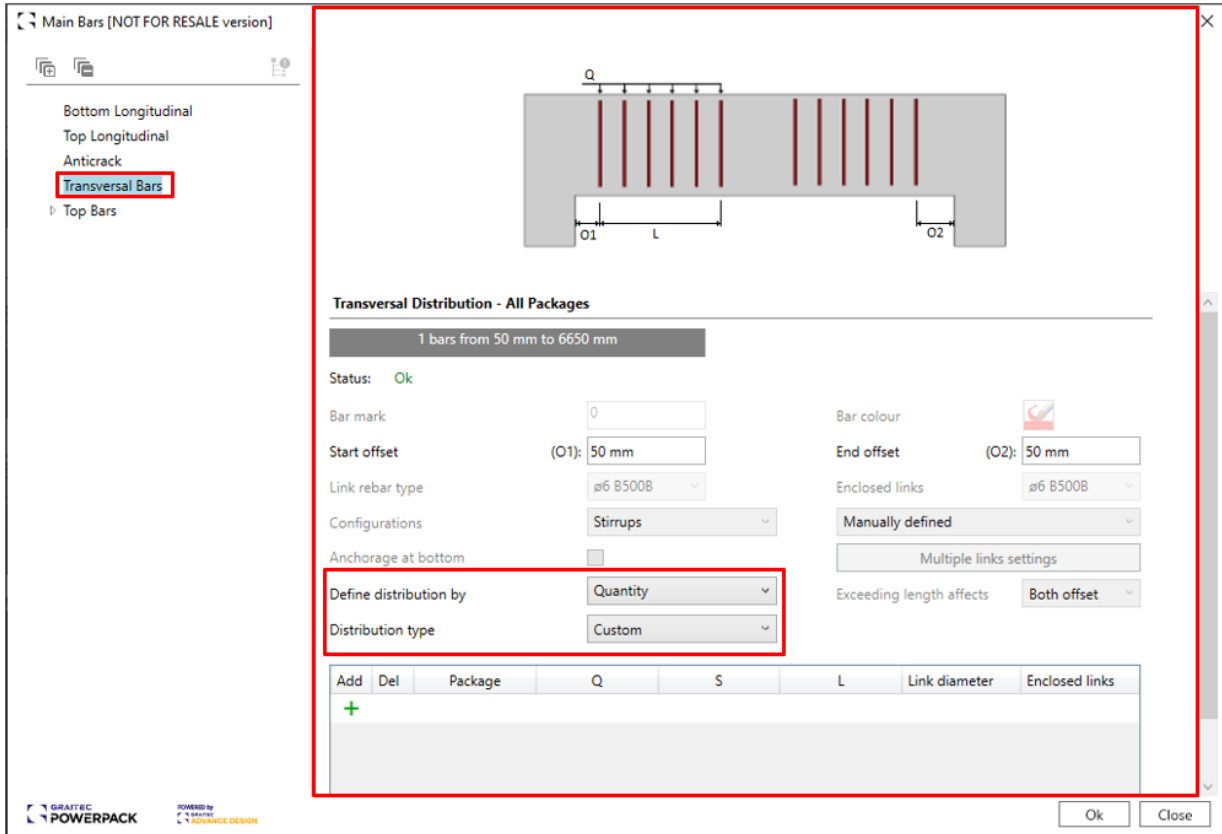
Using this tool also automatically resets the rebar number of each structural element selected.



Results users will get

5.6. Main Bars for Beams: UI enhancement

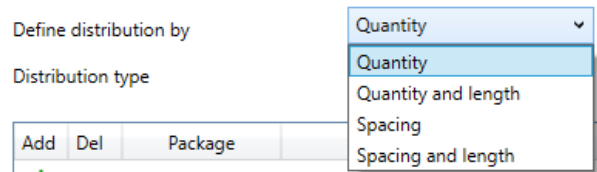
To simplify the process of reinforcing beams using "Main Bars," we have implemented certain improvements to the user interface. The Transversal Bars window has been enhanced, which enables easier reinforcement of the beams.



Transversal Bars' setting interface

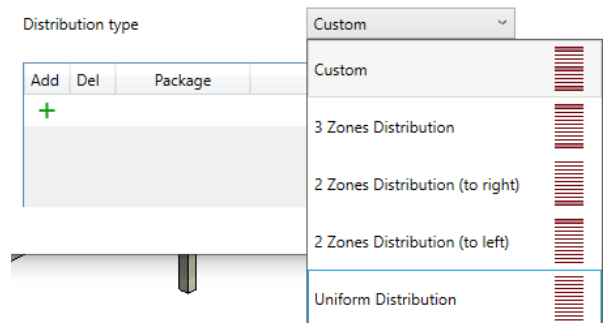
Users can define the distribution by:

- Quantity
- Quantity and Length
- Spacing
- Spacing and Length



And users can choose a distribution type:

- Custom
- 3 Zones Distribution
- 2 Zones Distribution (to right)
- 2 Zones Distribution (to left)
- Uniform Distribution

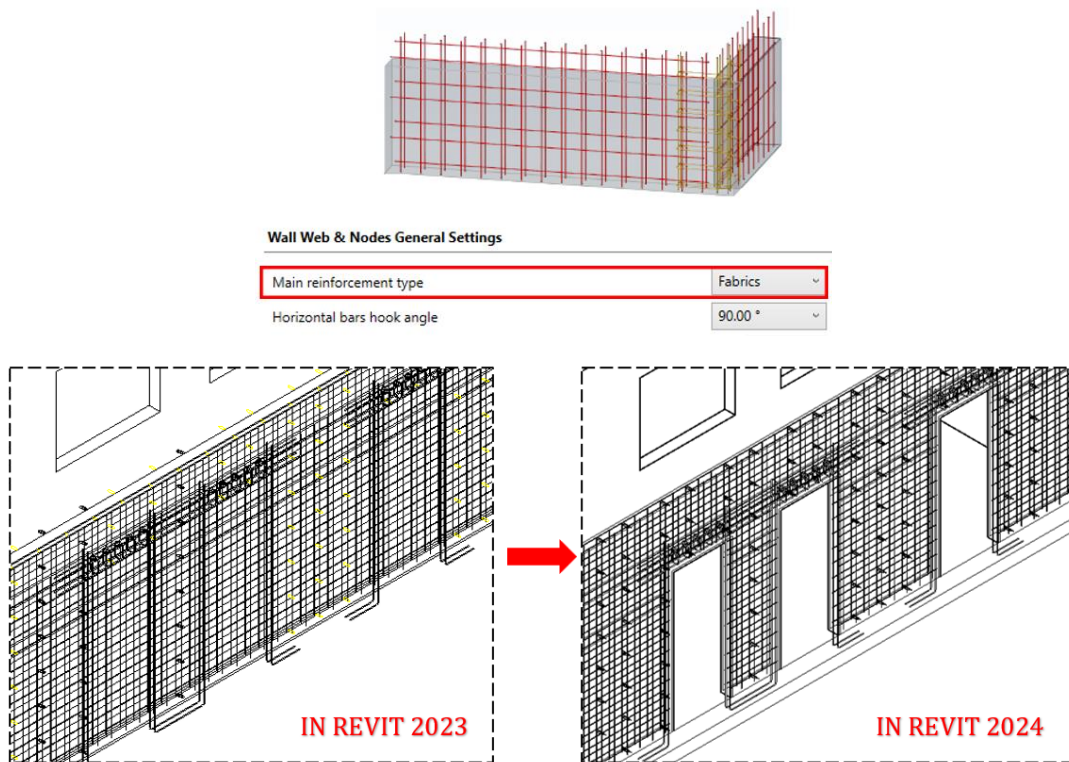


New distribution types

5.7. Fabrics cut for door openings when using Calculate or Constructive Dispositions

Sometimes when reinforcing walls using the “**Calculate**” or “**Constructive Dispositions**” tools, the fabrics could cover door openings.

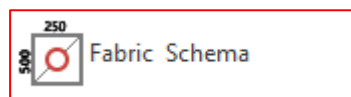
Powerpack for Revit 2024 enables fabrics generated through these functionalities to be expertly cut to accommodate door openings.



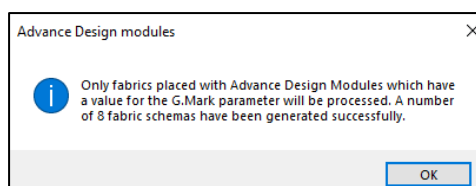
Fabrics cut are now considered when using “Calculate” or “Constructive Dispositions”

5.8. Fabric schema - Warning message if fabric images are not generated

When using the tool **Fabric Schema**, fabric images cannot be generated if they were placed with Revit, and not with **Calculate**, **Constructive Dispositions**, **Main Bars**, **Edit Slab Rebars**, etc.



The user is now informed if the images are not generated and there is an explanation.



Warning message if fabric images are not generated

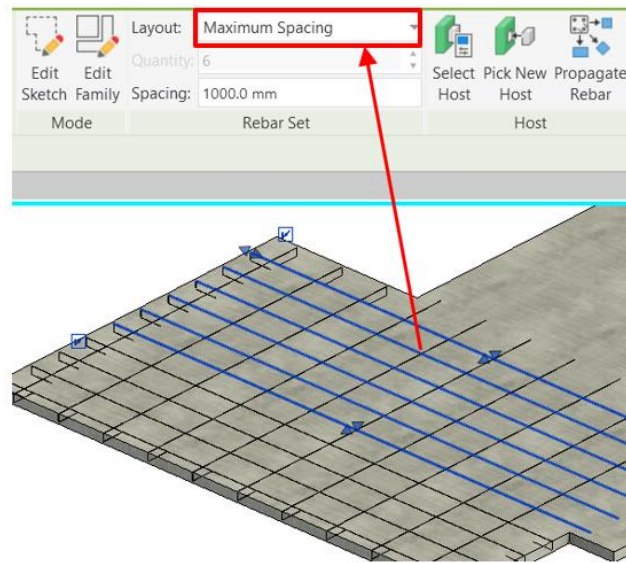
5.9. Setting the rebar distribution to maximum spacing for slabs

After generating the rebar zone for a slab, all the distributions are now set to “Maximum Spacing” distribution type will allow the user to improve his rebar cages easily if it is needed.



IN REVIT 2023

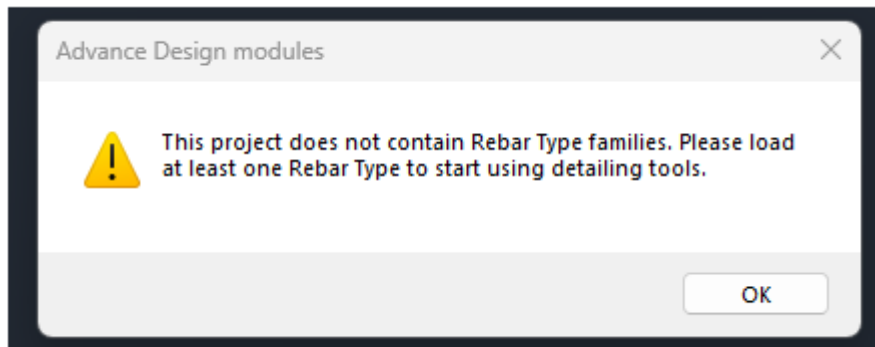
IN REVIT 2024



Distributions are now set to “Maximum spacing”

5.10. Warning message for no rebar types in the project

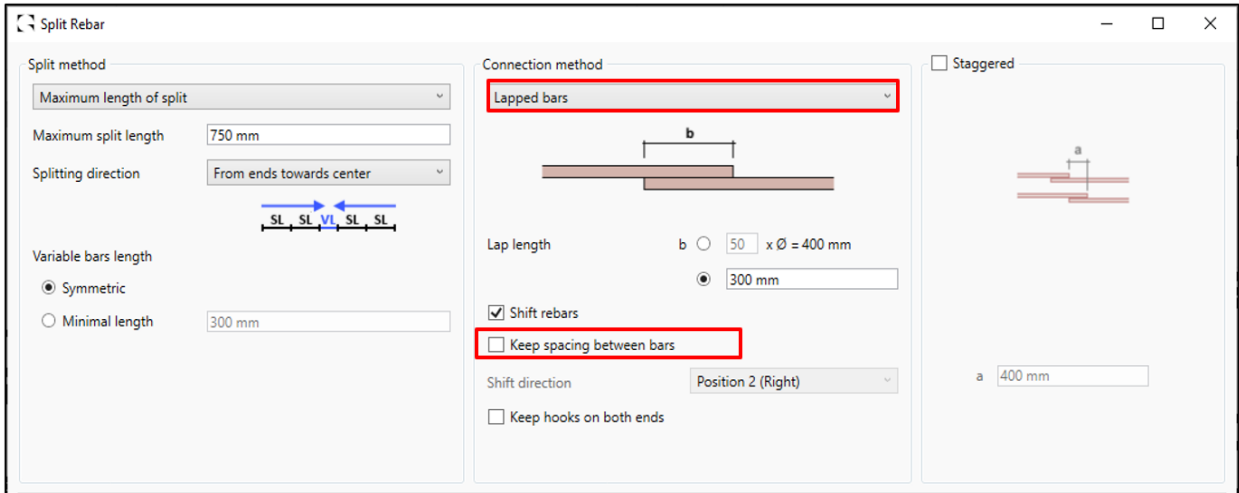
When using the **Detailing tools**, users will receive a warning message if there are no rebar types loaded in the project.



Warning message for no rebar types in the project

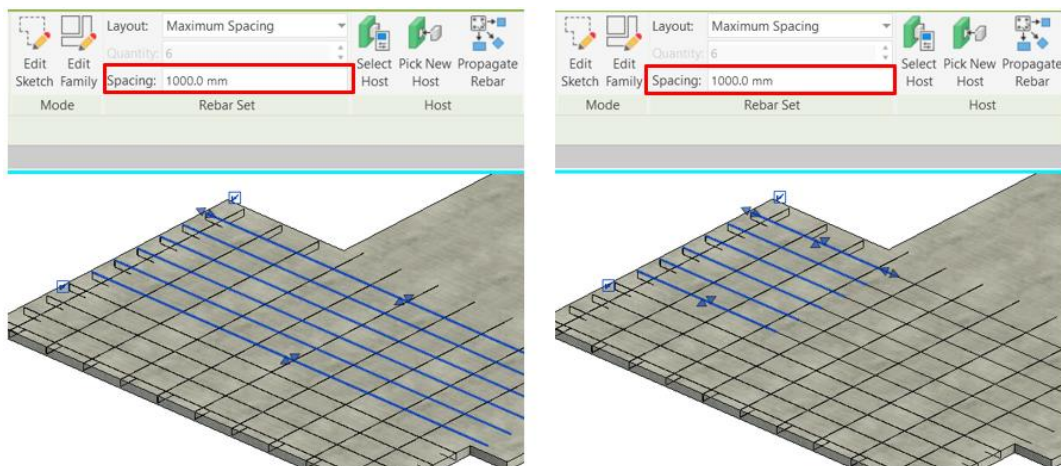
5.11. Split bars - Keep spacing of the initial rebar set after split

An additional feature has been introduced that allows for maintaining the distance between bars when selecting shift rebars. This feature ensures that the original spacing of the rebars is preserved and prevents the occurrence of decimal values when splitting the rebar. Moreover, it facilitates constructors to adhere to a rounded number for spacing.



Option "Keep spacing between bars" is now possible

As we can see in the following pictures, once the 'Keep spacing between bars' option is checked, the spacing of rebars remains unchanged.



Rebars original spacing is kept after checking this option

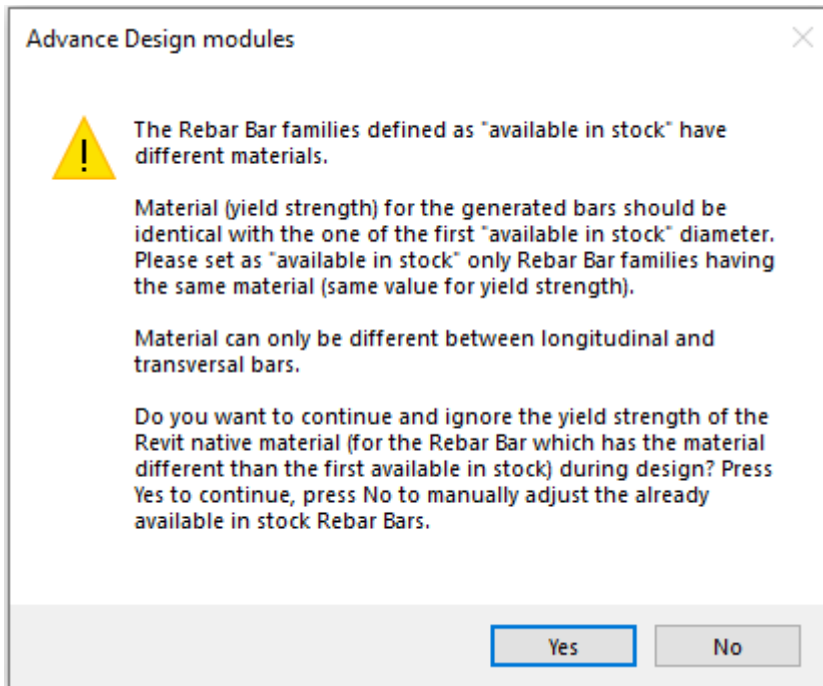
5.12. Read the material from the Revit Rebar

Our Powerpack can read the material (steel yield strength) from the Revit native Rebar Bar families.

Name	Longitudinal Reinforcement	Transversal reinforcement	Material	Yield Strength	Nominal Diameter	Real Diameter	Section
H6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	6 mm	6 mm	0.28 cm ²
H8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	8 mm	8 mm	0.50 cm ²
H10 (1)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<By Category>	0.00 MPa	10 mm	10 mm	0.79 cm ²
H10	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	10 mm	10 mm	0.79 cm ²
H12	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	12 mm	12 mm	1.13 cm ²
H16	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	16 mm	16 mm	2.01 cm ²
H20	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	20 mm	20 mm	3.14 cm ²
H25	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	25 mm	25 mm	4.91 cm ²
H32	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	32 mm	32 mm	8.04 cm ²
H40	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	40 mm	40 mm	12.57 cm ²
H50	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Steel Rebar - B500A, B or C	500.00 MPa	50 mm	50 mm	19.63 cm ²

Users can read Yield strength now

A warning message will appear when reinforcements are made with materials that have different physical properties.



Warning message