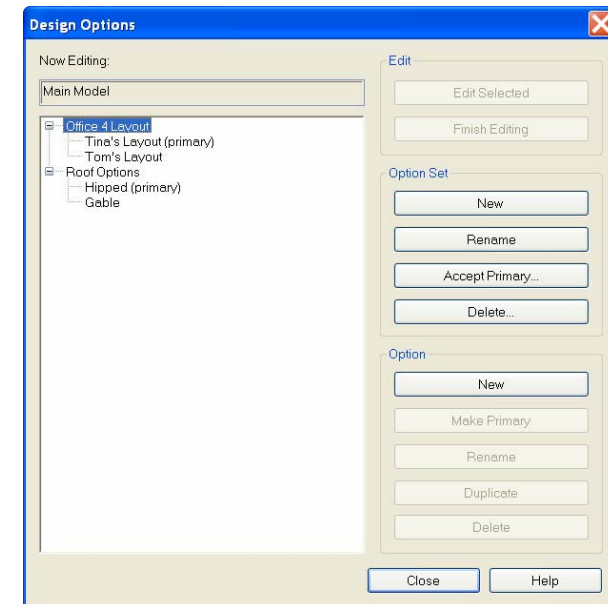




Design Options

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- Design Option
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- Primary Option
- Secondary Option
- Automatic Display
- How to.....



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Main Model

The main model encompasses all features of the design that are not optional, for example, the shell and core of the building

Design Option Set

An agreed-upon collection of alternatives that addresses a particular design issue, such as a lobby or a floor layout. Contains one primary option and any number of secondary options.

Design Option

A design option is one possible solution to the design problem, so typically there is more than one design option per design option set. One design option in the set is designated as the primary option.



Dedicated View

You can dedicate a view to a specific design option for each design option set, using the Design Options tab in the Visibility/Graphics dialog. When this view is active or added to a sheet, the option you have dedicated is shown along with the main model.

Primary Option

The favorite option in the set and has a closer relationship to the main model than secondary options. Elements in the main model and in the primary option can reference each other. Only one option in an option set can be the primary option. All other options are secondary. Each view in Revit Building is set by default to display both the main model and the primary option. You can change this by changing the design option visibility of the view.



Secondary Option

Any option that is an alternative to the primary option in the same option set. Elements in the secondary option can reference elements in the main model; however, elements in the main model cannot reference elements in the secondary option. Some relationships in Revit Building, such as walls joined at corners, need to be two-way relationships to be displayed accurately. In these cases it is necessary to put additional elements into an option to provide the correct two-way relationship. See Automatic Cleanup of Wall Joins with Design Options and Interdependent Elements Must Be in Same Design Option for more information.

Automatic Display

When you enable design options, you can control the visibility of design options in model views: plan, elevation, 3D, and drafting. By default, the visibility of a design option set displays the main model and the primary option if no options are being edited. If you are editing an option, the view displays the main model and the option you are editing. Also, you can dedicate the view to a specific option of an option set. For more information, see Comparing Design Options.



Naming Design Option Sets

- As with everything in Revit it is very important to name things as you go.
- Click Tools menu Design Options, or click the file tree button from the Design Options toolbar.
- To activate the Design Options toolbar, right-click on a toolbar, and click Design Options, or click Window menu Toolbar Design Options.
- In the Design Options dialog, under Option Set, click New.
- By default, Revit Building names the option Option Set 1 and creates a primary option in the option set.
- To rename the option set, select the option set name, and under Option Set click Rename. Enter a name for the option set, and click OK.
- To rename the primary option, select its name, and under Option, click Rename. Enter a name for the option and click OK.
- Click Close.



Naming Design Options

You should name design options according to their identifying elements. For example, if you have designated an entry design option set, you could create a design option called Entry-revolving for a revolving door within a reinforced concrete wall, or an option called Entry-storefront for a storefront with double acting doors.

- Click Tools menu Design Options Design Options.
- In the Design Options dialog, select the design option set to which you want to add an option.
- Under Option, click New.
- The default option name displays under the option set.
- To rename the option, select it, and under Option, click Rename.
- If desired, you can designate this option as the primary by clicking Make Primary.
- Make Primary promotes a secondary option to the primary option position. The former primary option becomes a secondary option.

NOTE: Elements in the main model can reference elements in the primary option, but they cannot reference elements in secondary options. Use caution with the Mark Primary command, as references between the main model and the former primary option can be lost. After using this command, you should check dimension references and tags to be sure they are accurate.

- Click Close.



Editing a Design Option

You can edit elements in a design option rather than in the main model.

- If it is not displayed, activate the Design Options toolbar by right-clicking on a toolbar and clicking Design Options, or click Window menu Toolbar Design Options.
- On the Design Options toolbar, click the red tick button. You can use the Design Options dialog: select an option, click Edit Selected, and click Close.
- From the list, click the option you want to edit. The list displays the most recently used design options and options from an option set submenu. To select an element in the drawing, click Pick to Edit, and then select the element.
- The Edit Option button stays selected while you are editing the option. If you place your cursor over the button, the tooltip tells you which option you are editing.
- Make your changes.
- When finished, click the red tick button again, or, In the Design Options dialog, click Finish Editing, and then click Close.

NOTE: If the design option display of the view is set to automatic, visibility defaults to the primary option; therefore, any changes to a secondary option are not displayed. To display the secondary option changes, duplicate the view and specify the visibility to show the desired option. See Comparing Design Options for more information. .



Adding an Element to an Option Set

You can add an element from the main model to each option in an option set.

- If it is not displayed already, activate the Design Options toolbar by right-clicking on a toolbar and clicking Design Options, or click Window menu Toolbar Design Options.
- In the drawing area, select the element.
- Be sure that you are not already editing a design option.
- On the Design Options toolbar, click the green plus button.
- In the Add to Design Option Set dialog, select the design option set to which to add the element.
- If you clear any of the design options for the selected design option set, the element is not added to that option.
- Click OK.
- The original element is now in the primary option and copies are in all selected secondary options of the option set. The Design Option parameter of the element properties shows the name of the design option it is in.

TIP: You can add an element to a single option by cutting the element from the main model and pasting it into the same place in the option while you are editing the option.



Selecting Elements in a Design Option

- When you are not in edit mode for a design option and want to select elements that are in design options, clear Exclude Options on the Options Bar. If you are in edit mode, Active Option Only is displayed on the Options Bar. When this is selected, you can select only elements in the view that are in the active design option.
- Editing an Option by Selecting Elements
- You can edit a design option by selecting an element that is in the option. Click Tools menu Design Options Pick to Edit. Select the desired element in the drawing area. Alternatively, you can click the red tick button, select Pick to Edit, and then select an element in the drawing area.



Comparing Design Options

- Duplicate a view; for example duplicate a 3D isometric view of the model.
- Open one of the duplicate views.
- Click View menu Visibility/Graphics.
- Click the Design Options tab.
- Select the design option to which to dedicate the view.
- Click OK.
- Any modifications made in this design option are displayed in the view.
- Repeat the same steps for each view in which you want to show a different option.
- If desired, add the views to a sheet, which you can print and present to a client.

TIP: You can specify design option display in all views, including schedules. For example, you can create a window schedule for the primary option or for a secondary option. Windows that are in the main model display in either schedule. To specify design option display for a schedule, edit the Design Options parameter in the View Properties of the schedule.



Accepting a Primary Option

After a primary option has been chosen, you can incorporate it into the main model and delete other options that are no longer necessary.

- In the Design Options dialog, select the design option set that includes the chosen primary option.
- If necessary, change a secondary option to the primary option using the Make Primary command.
- Under Option Set, click Accept Primary. Revit Building prompts you to confirm this action.

WARNING: This action deletes all secondary options and the option set. You can undo this action, but you should be sure that you do not need any other options.

- Click Yes. Revit Building adds the primary option to the main model and deletes all other options and the option set.
- Click Close.



Views, Levels, and View-Specific Elements

You cannot add levels and views to design options, nor can you add most view-specific elements, such as drafting components. Most drafting components are view specific. If you place a view-specific element while you are editing a design option, the view-specific element appears grayed out in the view. The only valid view-specific element is a room tag. View-specific elements can reference elements in design options; for example, you can dimension elements in a design option.

You can specify the visibility of view tags in design options; each view tag has a property called Visible in Option. If you create a view while editing the main model, the value of this property is set to All, and the view tag is visible in all design options. If you create a view while you are editing a design option, the value of this property is set to the design option currently being edited. If you change the value of Visible in Option, the view is visible in that option only.



Deleting Dedicated Views

If you delete a design option or the design option set that contains the option, you can automatically delete any views that are visible in the option. Alternatively, you can delete any views that are dedicated to the option but are visible in all options.

For example, Floor Plan Level 1 is dedicated to Floor Plan Option 2 of Office Option Set 1. In the Design Options dialog, you delete Floor Plan Option 2. The Delete Dedicated Option Views dialog is displayed, listing all views that have the Visible in Option property set to Floor Plan Option 2, or are dedicated to Floor Plan Option 2.

You can remove a view from the list of deleted views unless it has its Visible in Option property set to a deleted option. After the pending deletion, such kept views will have their option visibility reset to <automatic>.



Important Considerations Rooms

- If you place a room into the main model, the room uses room-bounding elements in the main model and all primary options to define perimeter and area. The room ignores walls and room separation lines in secondary options.
- If you place a room into any option, it uses walls and room separation lines in that option, in the main model, and in primary options of other option sets. It ignores walls and room separation lines in other options of each option set.
- To assign different room properties, such as occupancy, in different options, the room must be included in that option set.
- If the shape, size, or location of a room varies in different options of one option set, then the room must be included in that option set.
- If the shape, size, or location of a room varies when you switch among different options of two or more option sets, then you must divide the room with room separation lines into rooms each of which varies in only one option set. Then put each room into the appropriate option set.



Interdependent Elements Must Be in Same Design Option

- Elements that are dependent upon another element must be in the same design option:
- Inserts that cut their hosts, for example, walls and windows. Inserts that do not cut their hosts can reside in different design options. For example, a cabinet can reside in a different design option than the wall on which it is mounted.
- Host sweeps and their hosts. For example, walls and wall sweeps.
- Topographical surfaces and building pads.
- Curtain panels, mullions, and grids. In the first four examples, if you add the host to the design option, the hosted element is automatically included. If you try to add the hosted element without the host, Revit Building warns you that the host must be added.
- When you create groups or arrays, selected elements must be in the active option, or, if no option is active, they must be in the main model.
- If you are adding elements to a group, the elements must be in the same option as the group.



Automatic Clean up of Walls

Wall join cleanup between walls in the main model and walls in the primary option functions the same way as when all walls are within the main model or within an option. If there is incorrect wall join behavior between the main model and secondary options, add the wall in the main model to the option set.

Design Options and Worksets

All design options and design option sets are included in a Project Standards workset called Design Options.

To edit an element in a design option, you must have the element and its particular design option editable. To make an element and its design option editable, use element borrowing. For more information, see Element Borrowing.



Design Options and Area Analysis

You cannot add area schemes to design options. To perform area analysis with different design options, create multiple area schemes using the Area Settings command. Create an area plan for each area scheme and set the area plan view visibility to show the desired options. When not in design option edit mode, create all area calculation boundaries and tags in that area plan view. For more information about area analysis, see Area Schemes.

Design Options and Area Analysis

Elements in the main model cannot reference elements in secondary options. As such, elements in the main model do not change their shape or properties when you are looking at a view displaying a secondary option. For example, if you sketch four walls in the main model and then sketch a roof in a secondary option, the walls do not regenerate and attach to the roof.

If main model elements need to update with and reference elements in secondary design options, move the main model elements into the design option set using the Add to Design Option Set dialog.



Questions?

A big thank you to everyone who has helped me understand the how and why of Revit over the years.