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of Victoria

Notes:

REVIC FAMILY SESSIONS: Outline Class structure – 26/01/2010

SESSION 1: Tuesday 8th of February - By Brian Renehan – Cox Architects

2D FAMILIES – Generic Annotations & Detail Components

Family Background:

What are Families? (From the Revit Family Guide)

A family is a group of elements with a common set of properties, called parameters, and a related graphical representation. Different elements belonging to a family may have different values for some or all of their parameters, but the set of parameters (their names and meanings) is the same. These variations within the family are called family types or types.

Different Kinds of Families:

There are 3 kinds of families in Revit:

- system families – e.g. walls
- loadable families (sometimes called external families) – e.g. doors
- in-place families – a one off unique piece of joinery.

Most elements that you create in your projects are system families or loadable families.

Loadable families can be combined to create nested and shared families. Non-standard or custom elements are created using in-place families.

Generic Annotation Families: - Symbols

Family Sample Demonstration file: Stair and Ramp Arrow



Revit official definition:

Text that documents a building model. Generic annotations are usually related to a parameter for a model element or type.

You can create generic annotation families and nest them inside host model families, so that the annotations display in the project. This is useful if you want to include a label with a model family and display that label in the project.

Main Properties:

- Generic Annotations (Symbols) in the project are turned on and off in the project file under Visibility/Graphics – Annotation Categories – Generic Annotations
- Can be an editable / parametric text label and or symbol,
- Text in the family will be visible project.



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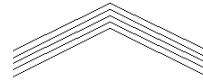
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- Graphically reads the same size at any scale. (i.e. prints out that same size)
- It's parameters can be scheduled using a "Note Block" in a Revit Project. There are no Type comments or Keynote system parameters with these families, thus these items cannot be scheduled.
- Can not contain lines less than 0.8mm long.

Workaround for this are:

Use multiple lines close together for filled regions.



View on Thin lines On

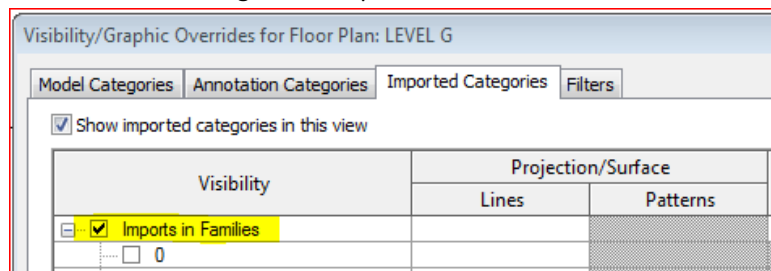


View on Thin Lines off

Use an imported AutoCAD file:

This is often very helpful with Logos on drawing title blocks.

Note: Whenever you have nested AutoCAD files in Revit you must have Visibility/Graphics – Imported Categories – Imports in Families turned on.



- Cannot use shared parameters in a Generic Annotations family.
- They behave very similar to Tag families. However you can add Shared Parameters to a Tag Family
- When placed in a view will appear in front of (over) every other Revit item with the exception of text.

Tips on Generic Annotation Families:

- Avoid moving the Family reference plane origin point as it will different to the family fixed origin and may cause the family not to act correctly.
- When creating text symbols which need to rotate with the items and not be readable ensure you select not readable in the label instance

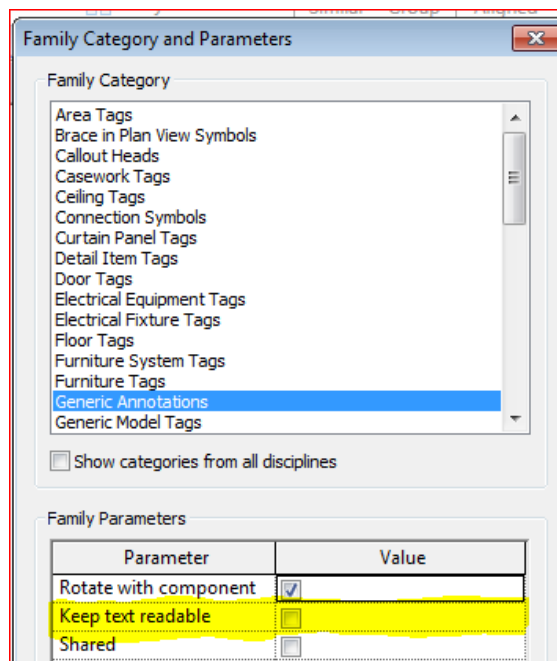
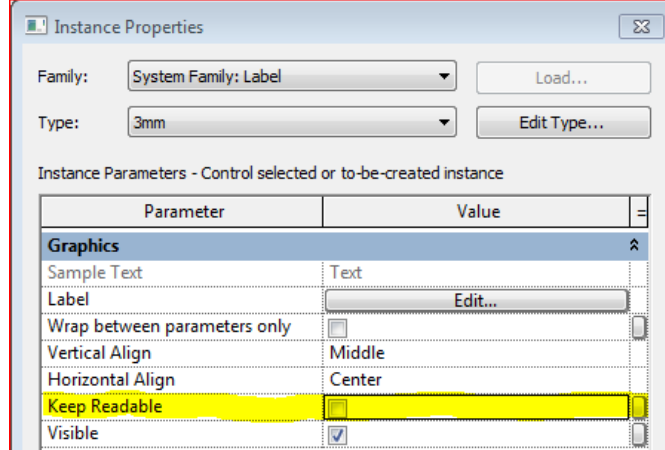


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properties and in the family Categories and Parameters box.



- In a project file you can only dimension to the symbol here its reference planes are. You cannot dimension to reference lines or lines.
- Symbols can have leaders in the project file.
- Take care with Text Labels on if should be set to Transparent and be bottom Vertical Aligned and placed in relation to the Reference plane.

Common uses for Generic Annotations - Symbols:

- North Arrows
- Scale Bars
- Note Boxes/ Blocks
- Fall Arrows
- Centre line symbols

Detail Component Families:

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Revit official definition:

A 2D element that you can add to a detail view or a drafting view. For example, you may want to add a metal stud or a shim to a drafting view.

Main Properties:

- Detail components in the project are turned on and off in the project file under Visibility/Graphics – Model Categories – Detail Items. (Related tip – Detail items within the project includes filled regions and masking regions.)
- They are 2D families,
- They can be parametric and can contain nested Generic Annotations,
- They cannot be scheduled
- Can contain flip and rotate controls.
- They can be Keynoted, contain shared parameters and under Visibility; filtered using their parameters.
- One in the project they cannot be scaled without going back into the family and scaling them from there.
- Text within the family will not be visible in the project (nested generic annotations will be visible). – Note Detail components do not have Labels. You must use nested Generic Annotations.

Tips on Detail Component Families:

- Avoid moving the Family reference plane origin point as it will differ from the family fixed origin and may cause the family not to act correctly.
- The line based Detail Component family is very powerful and as it is line based you can trim it in a Revit Project. E.g. – Line with symbols along them - ---GAS-----GAS-----GAS-----
- Can be used with repeating details in the project – e.g. Block-work.
- Can be nested in 3d families to represent an elevation or plan.