

Understanding Autodesk Revit Terms

Most of the terms used to identify objects in Autodesk Revit are common, industry-standard terms familiar to most architects. However, there are some terms that are unique to Autodesk Revit and understanding them is crucial to understanding the software. This section defines the basic terms used in Autodesk Revit.

Autodesk Revit terms

The first term you need to know is *project*. In Autodesk Revit, the project is the single database of information for your design-the building information model. The project file contains all the information for your building design, from geometry to construction data. This information includes components used to design the model, views of the project, and drawings of the design. By using a single project file, Autodesk Revit makes it easy for you to alter your design and have changes reflected in all associated areas (plan views, elevation views, section views, schedules, and so forth). Having only one file to track also makes it easier to manage the project.

When creating your project, you add Autodesk Revit parametric building elements to the design. All elements are considered categories. Autodesk Revit classifies elements by model component elements and annotation elements. A model component element, such as a door, desk, or roof, represents the actual 3D geometry of the building. An annotation building element, such as a door tag, elevation symbol, or room tag, helps document the model.

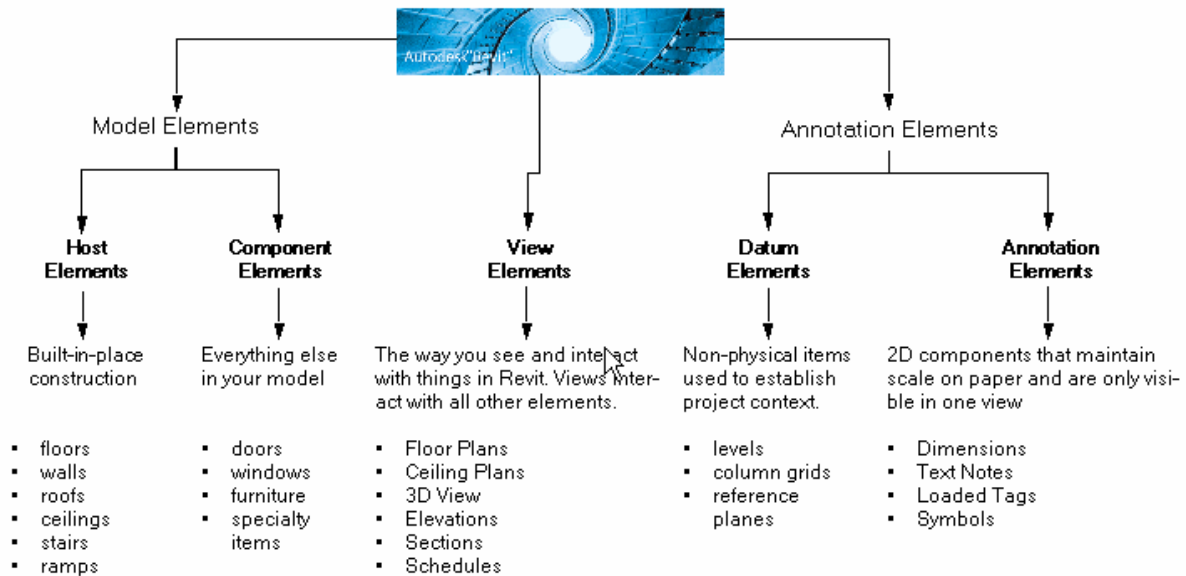
Families are classes of elements in a category that group elements with a common set of parameters (properties), identical use, and similar graphical representation. Different elements in a family may have different values for some or all properties, but the set of properties-their names and meaning-is the same. For example, six-panel colonial doors could be considered one family, although the doors that compose the family come in different sizes and materials. Most families are component family files, which means you can load them into your project and create them from family templates. You can determine the set of properties and the graphical representation of the family. Other families are called system families. These families, which include walls, dimensions, ceilings, roofs, floors, and levels, are not available for loading or creating as separate files. Autodesk Revit predefines the set of properties and the graphical representation of system families. You can use the predefined types to generate new types that belong to this family within the project. For example, the behavior of a wall is predefined in the system; however, you can create different types of walls with different compositions. These new types can be transferred between projects.

Each family can have different types. A type can be a specific size of a family, such as a 30 X 42 title block or a 1730 X 2032 door. A type can also be a style, such as default linear or default angular style for dimensions. A family can have several types. For example, a table could come in several different sizes. Each different size would be a new type within the same family.

Instances are the actual items that are placed in the project and have specific locations in the building (model instances) or on a drawing sheet (annotation instances).

Autodesk Revit Elements

There are five types of elements. Each represents something fundamental to your project



Example of a Family Tree

Element: Wall
Family/System Family: Basic Wall
Type: Exterior - Brick on CMU
Instance: Actual user-drawn wall in project