

# Table of Contents

1.	Comprehensive Evaluation		3
2.	Houseplan 1.0 Advantages		3
	Comparison Details		
	1)	Modeling	5
	2)	Material	5
	3)	Rendering	6
	4)	Animation	6
	5)	Compatibility	6
	6)	Output	7

# Houseplan 1.0 VS AutoCAD 2024

Houseplan 1.0 is a powerful, easy-to-learn, lightweight and compatible 3D modeling and real-time rendering software that can create 3D models quickly and demonstrate your scheme independently. Its multiple modeling methods, convenient real-time rendering and plenty of 3D model and texture resources offer you great work experience and design results with the lowest budget.

## 1. Comprehensive Evaluation

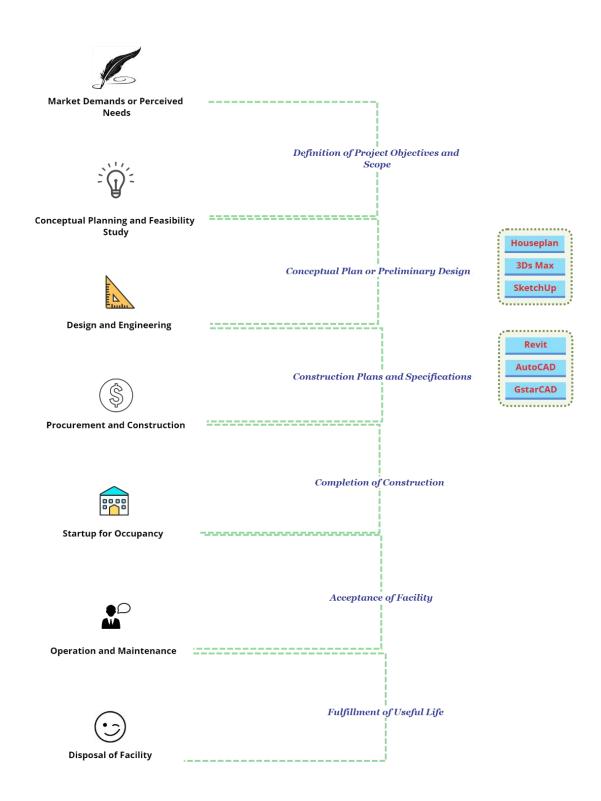
Both Houseplan 1.0 and AutoCAD 2024 are modeling and rendering software used for creating various types of models and visual effects. They are capable of performing a range of modeling and drawing processes.

AutoCAD 2024 is widely utilized in architectural engineering, decoration design, civil engineering, mechanical design, and other fields. It primarily emphasizes the realization of graphic processing functions in industrial design and is mainly utilized in design and engineering, as well as procurement and construction stages. Houseplan 1.0 is extensively utilized in architectural and scene design drawings, with a focus on the realization of three-dimensional modeling and rendering functions. It is mainly utilized in conceptual planning or preliminary design stages.

## 2. Houseplan 1.0 Advantages

- Affordable price and Perpetual License.
- Small software size
- Tools are easier to be understood, making it easier to learn.
- Modeling professional elements like buildings and roads with a few clicks.
- Supports inserting DWG drawing and extrude to a building directly.
- High level of integration, enabling quick results and high work efficiency.
- Real-time rendering without additional plugins.
- Comes with an animation library, allowing for easy insertion and movement.

#### **Brief Construction Workflow**



## 3. Comparison Details

## 1) Modeling

#### Houseplan 1.0

Houseplan 1.0 is an exceptional 3D design software that can be used in creating houses and environmental models. It offers a wide range of modeling modes to cater to various design requirements and seamlessly integrates graphic design, architectural knowledge, computing, and other advanced technologies.

Houseplan 1.0's unique "Sculpture Method" employs specialized functions to simplify the design of buildings and roads, enabling users to efficiently construct models through parameter input, extruding operations, and component carving.

Furthermore, Houseplan 1.0 has developed a structured lightweight advanced modeling module that boasts simple yet powerful features, high integration, and ease of use. The module's tools effectively meet complex modeling requirements and offer the modeling capabilities of traditional software, while its user-friendly interface makes it accessible to both professionals and amateurs alike.

Houseplan 1.0's comprehensive modeling functions enable users to create complex models effortlessly. It supports the creation of planes and 3D objects such as rings, cones, and pyramids, as well as commonly used editing functions for elements like points, lines, and planes, including extrusion, deformation, lofting, lattice, and mapping. With these advanced features, Houseplan 1.0 enables users to quickly build 3D simulation scenes with ease.

#### AutoCAD 2024

AutoCAD 2024 can be used for 2D and 3D drafting, design, and modeling. It supports the creation of solids, surfaces, mesh objects, documentation, and more. However, its focus is more on 2D drafting, and its 3D functions are not its strength, especially with irregular 3D graphics.

# 2) Material

#### Houseplan 1.0

An open material system has been developed in Houseplan 1.0, equipped with a user-friendly material editor. It features a unique layered approach to building materials and supports easy and efficient material pasting.

Materials can be enhanced with various effects such as bump, reflection, self-illumination, and glow. For water surfaces, users can choose between Mapping Reflection and Real Reflection, and adjust parameters such as Glossiness, Reflection Intensity, Fresnel Offset, Fresnel Index, Ripple Height, and more.

For simple models, Houseplan 1.0 provides Modal Adjustment and Free Adjustment tools, while more complex models can benefit from the UV Editing tools, which enable the assignment and adjustment of editable polygon materials.

#### AutoCAD 2024

The mapping adjustment interface in AutoCAD 2024 is relatively complex, making it challenging to work with models that have complex textures, especially when the UV is 1\*1 and needs to cover multiple polygons simultaneously. This difficulty is compounded when dealing with models that have complex curved planes that require unfolding the UV.

## 3) Rendering

#### Houseplan 1.0

Houseplan 1.0 provides users with a comprehensive simulation environment that accurately replicates real-world physical characteristics, such as geometry, materials, lighting, shadows, and weather. The rendered images resemble photos and are easily editable. With real-time rendering capabilities, users have access to various environments and customizable scene parameters.

The software also supports synchronous dynamic rendering, powered by a high-performance rendering engine that resolves the challenge of flexible 3D graphics editing and simulation synchronization. So, you can design in interactive, responsive environments that immediately display the rendered results.

#### AutoCAD 2024

AutoCAD 2024 has material, lighting and rendering functions, but the rendering effect is not ideal, and often needs extra refine in Photoshop.

## 4) Animation

#### Houseplan 1.0

Houseplan 1.0 has an animation entity library with set actions, which allows adding animation entities to scenes directly, and formulating and editing the animation path at the same time. The operations are simple and fast.

#### AutoCAD 2024

AutoCAD 2024 does not support multi-threading techniques, which means that complex animations cannot be created because instructions can only be executed sequentially. Using AutoCAD 2024 create animations may consume a considerable amount of computer memory and may cause the computer to crash.

## 5) Compatibility

#### Houseplan 1.0

Houseplan 1.0 supports importing 2D and 3D data and commonly used pictures in osgb(tile), rvt , skp, obj, 3ds, dwg, fbx , cgr, dem, tif, jpg and other formats, and also supports their editing and application. It also allows importing DWG drawings and extrude directly, as well as the import of data such as oblique photography and point cloud data.

AutoCAD 2024 supports file formats like fbx, 3ds, dwg, dwf, 3dm, jt, ipt, prt, bmp, etc.

## 6) Output

#### Houseplan 1.0

1) 2D and 3D Output Layouts can be exported as DWG/DXF, or many other 3D formats.

#### 2) Publish

Provides tools specifying camera points and video paths to export images and videos. Also, you can publish your design with a .exe file that can be operated independently to view images and videos, draw new video paths, display properties, and switch weather environments.

#### 3) Image

You can set viewpoints and output a variety of image formats.

#### 4) Video

Houseplan 1.0 specially designed an easy-to-use video module, users can formulate and edit drawing paths and view angles, preview or save video results, and then quickly output roaming animations to mp4, mkv and other video files.

#### AutoCAD 2024

The scheme can be exported as 2D and 3D formats files as well as pictures and videos.

