



Autodesk® Revit® Architecture – New Features

Speaker(s) Michael B. Zeeveld – Applied Software

AB1496 This class covers the updates of Autodesk® Revit® Architecture 2013, from schematic design through construction documentation. Students will be introduced to the concepts of Building Information Modeling and the tools for parametric design and documentation. Learn the new features in this release with topics including Parts, assemblies, Visual Graphics, Worksharing, Linear Dimension Splitting and Segmented Gridlines.

Learning Objectives

At the end of this class, you will be able to:

- Become familiar with the new features, concepts and benefits of Building Information Modeling.
- Understand the fundamental concepts and features of Autodesk Revit Architecture 2013.
- Use the parametric 3D design tools to start designing projects.
- Develop an initial level of comfort and confidence with the new tools in Autodesk Revit through hands-on experience

About the Speaker

Michael is a Senior Application Specialist currently based out of Atlanta. He travels the southeast spreading the word about Revit, BIM, the AEC industry and software technology. Michael has more than 17 years of experience ranging from CAD management, commercial architectural drafting/Team Leader, 3D modeling, visualization and program customization to information technology. He has experience in software applications that include AutoCAD, AutoCAD Architecture, Revit Architecture/ Structure, 3ds Max Design, Photoshop and SketchUp. Michael is an Autodesk Certified Associate and Professional for multiple releases in AutoCAD, AutoCAD Architecture, Revit Architecture, 3ds Max Design and an Autodesk Consulting Specialist and Structural Specialist. He is an Associate Member of the American Institute of Architects. He has had the distinct honor of presenting and teaching at Autodesk University in 2006, 2010 and 2012, as well as a presenter at RTC and multiple AUGI CAD Camps.

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Topics

General Enhancements

- Project Templates
- Project Browser
- View Types
- View Templates
- Filters List
- Dimensions
- Family Editing
- View References

Visualization Graphics

- Background
- Surface Transparency
- Hardware Acceleration
- Anti-Aliasing
- Realistic Visual Style
- Ray Trace Visual Style

Materials

- New Data model
- UI
- Thermal Properties
- Structural Properties

Misc

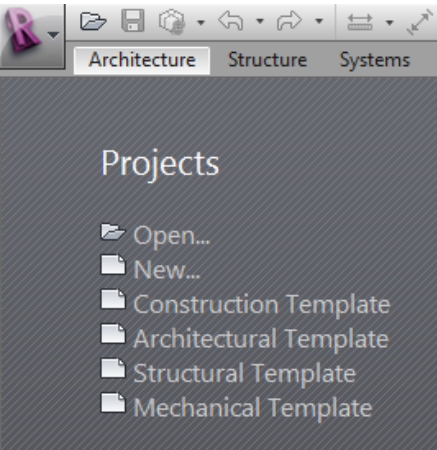
- Interoperability
 - DGN/IFC
- Revit Server
- Construction Modeling
- Conceptual Design Environment
- Loop Arrow Style
- Workshare Enhancements
- Zoom to Fit
- Stairs
- Railing
- Ribbon tab Changes
- Selection Set
- 3 products in 1
- UI config
- Suite Workflow
- Parts
- Assemblies
- Parametric Components
- Exchange App Store

General Enhancements

Application

Building Design Suite Ultimate 2013

“One Box” concept

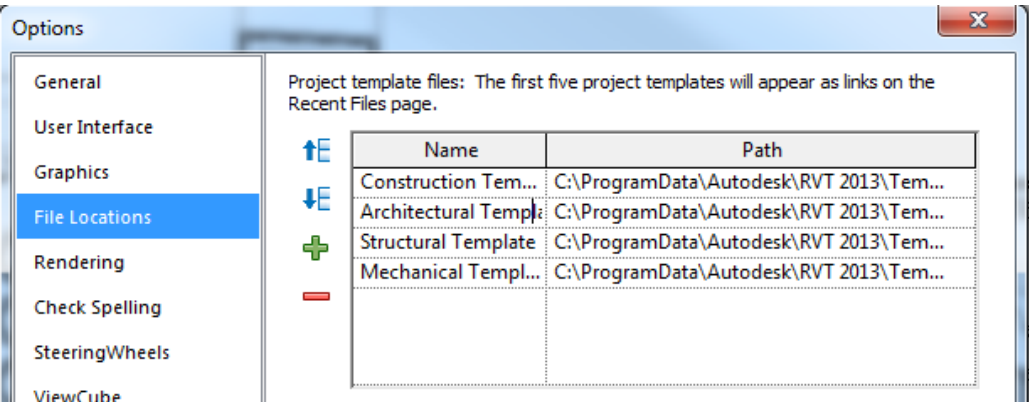


Multiple Disciplines

Templates

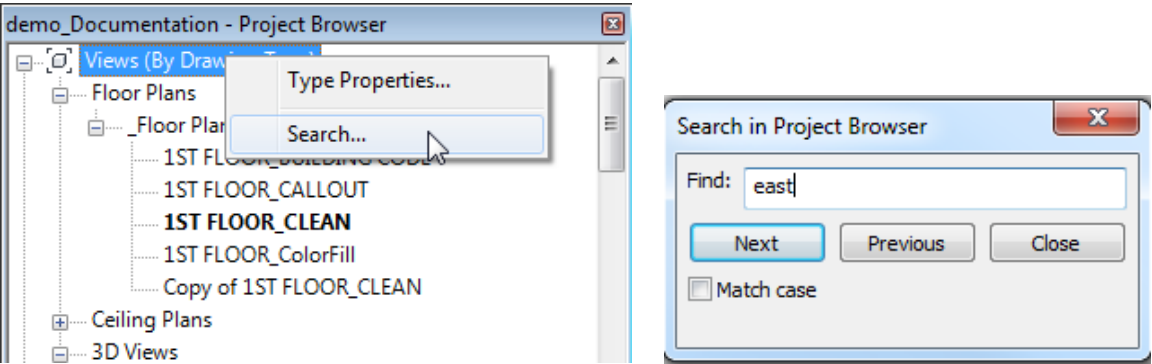
Multiple discipline templates to choose from

File Locations



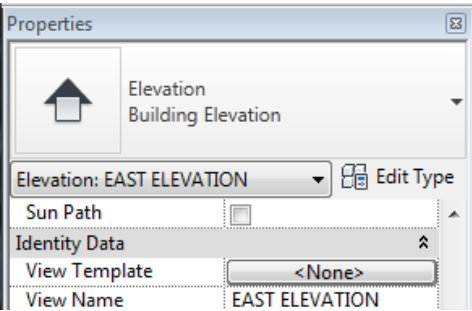
Searchable Project Browser

Right click in Project Browser



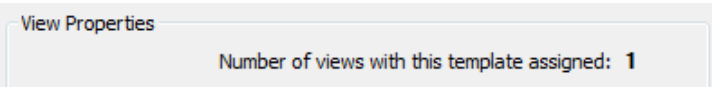
View Templates

Assign by a view template properties



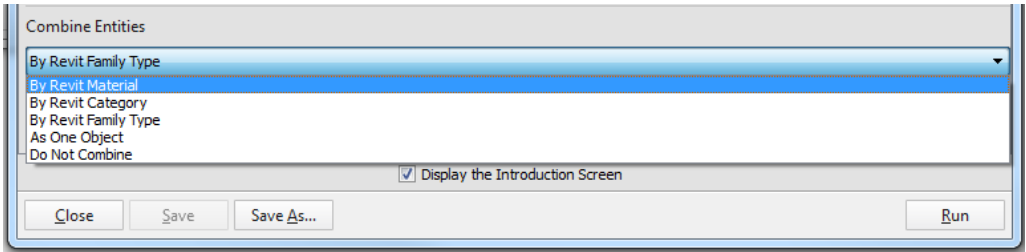
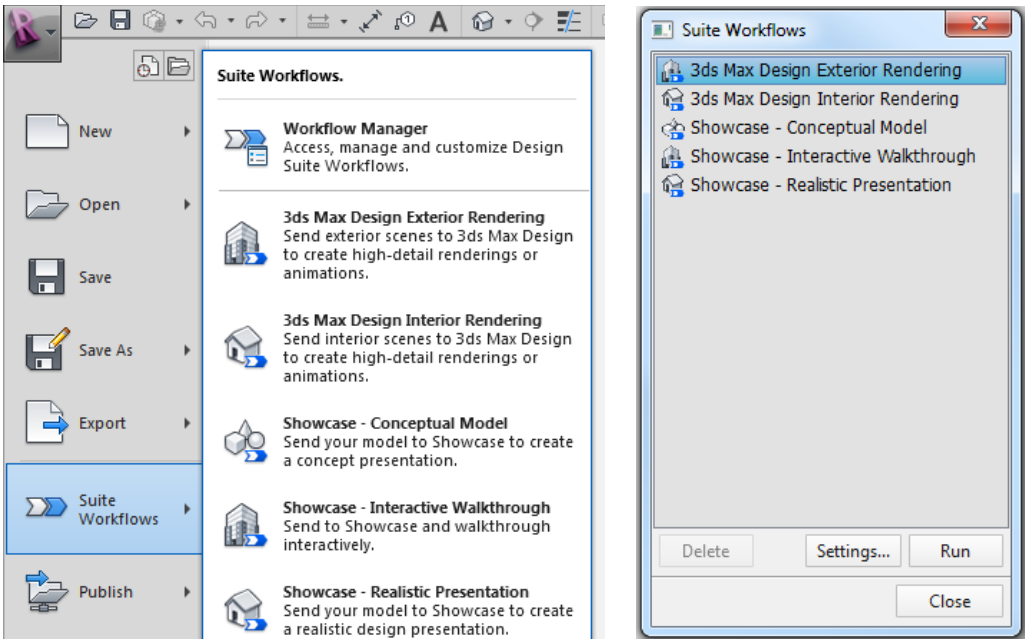
Template to view

Future changes to template affects views it is assigned to



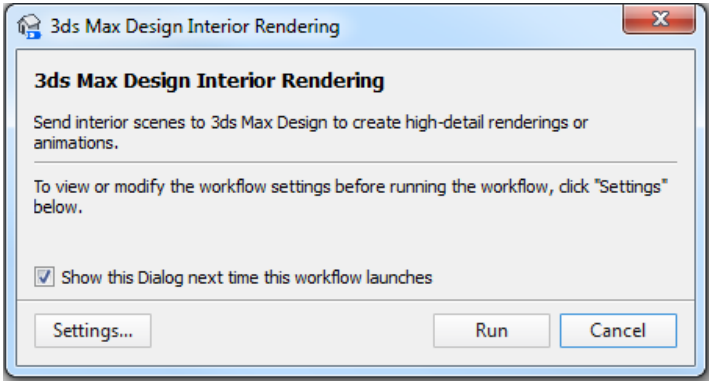
Suite Workflow

Simplified workflow



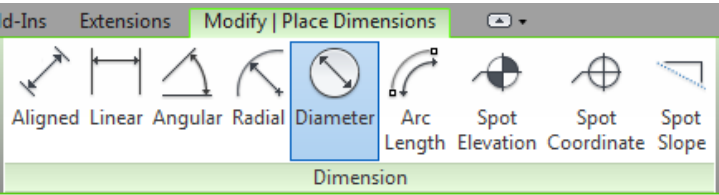
3ds Max Design

Showcase



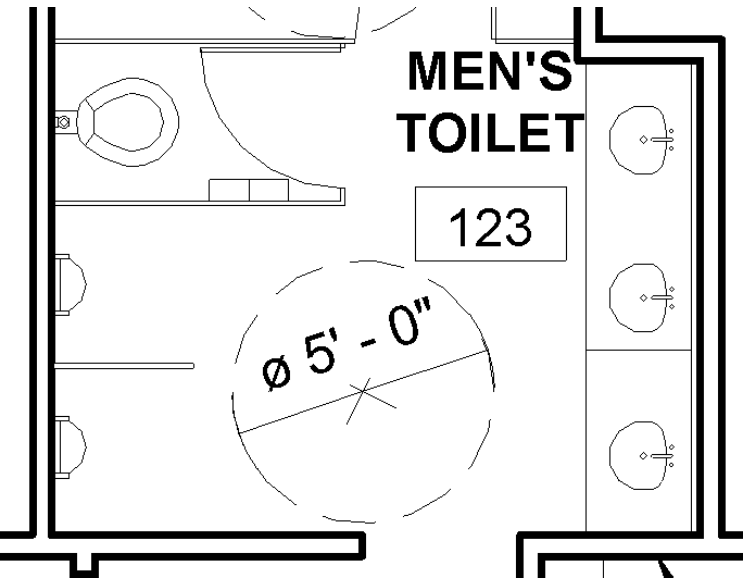
Dimensions

Diameter Dims

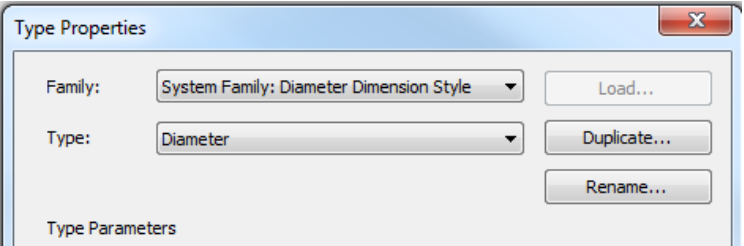


Delete Dim segments - Tab - Delete

Dim Display

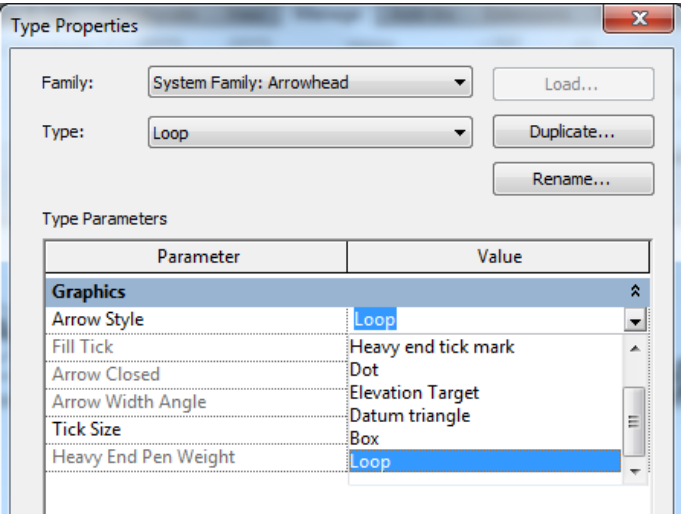


segment values, equality text, or the equality formula string



Arrowhead

Loop



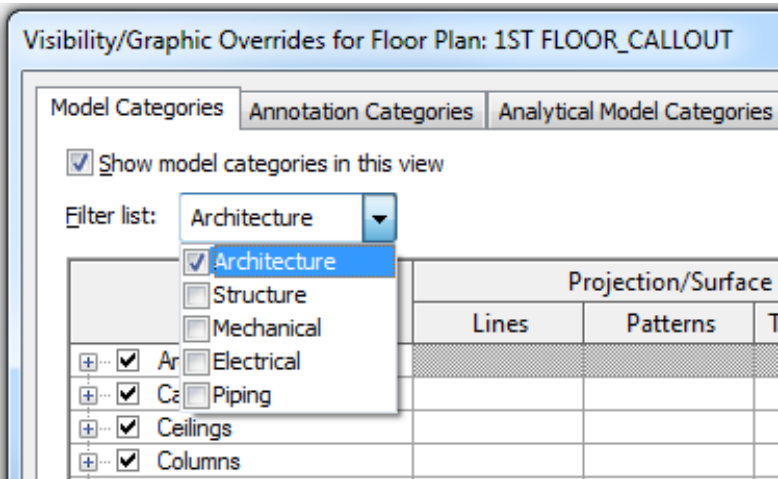
LOOP

Families

Double click editing

Filters List

Multi-discipline

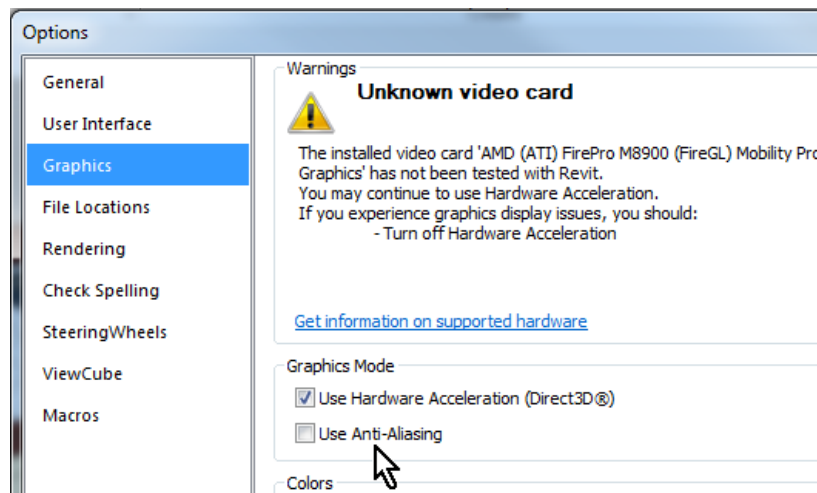


Surface Transparency Slider

Replaced Ghost Surfaces

Hardware Acceleration

Anti-Aliasing



Improved Performance:

- realistic mode
- ambient occlusion
- surface transparency
- anti-aliasing

Parts

Merge parts

Part project excluded

Divider offset for part divisions

Parts from loaded families

Assemblies

New view options

Assembly views placement

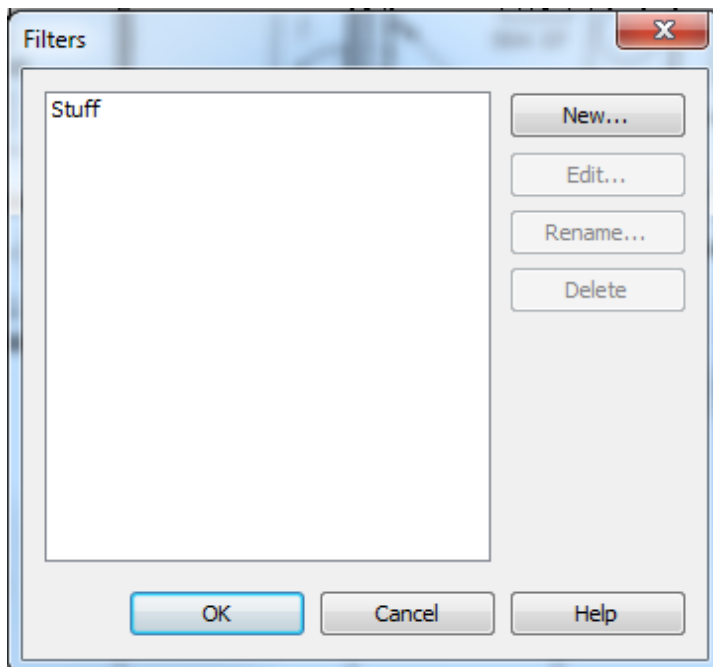
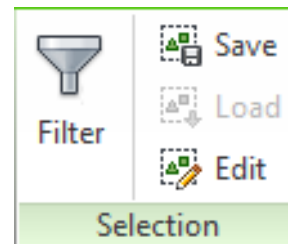
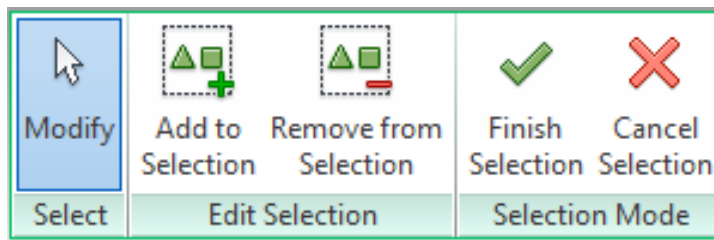
Element edit assembly mode

Origin

Local coordinate system

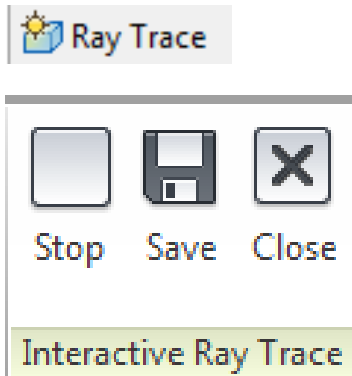
Selection Sets

Previous only in Revit Structure

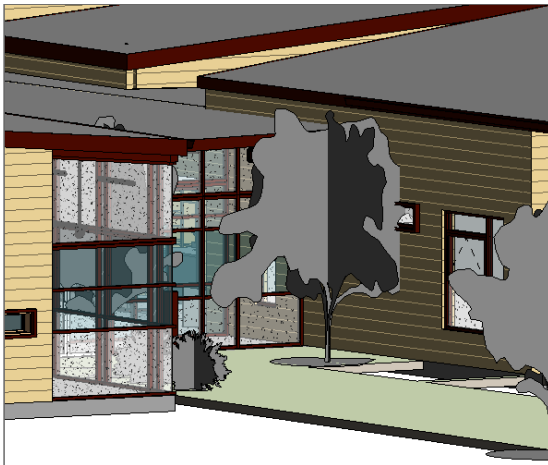


Visual Style

Ray Trace



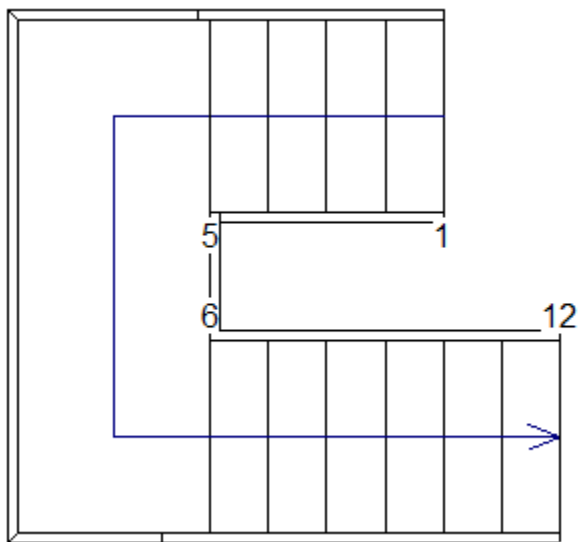
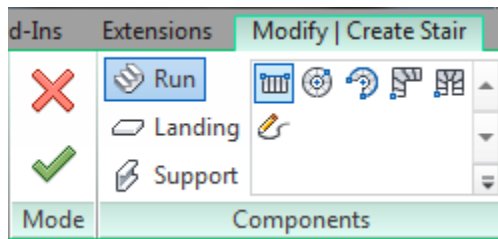
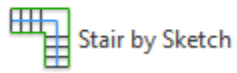
Interact with Camera in real time



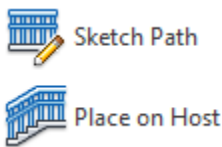
64 bit systems only

Stairs

Component based



Railings



Handrail transitions

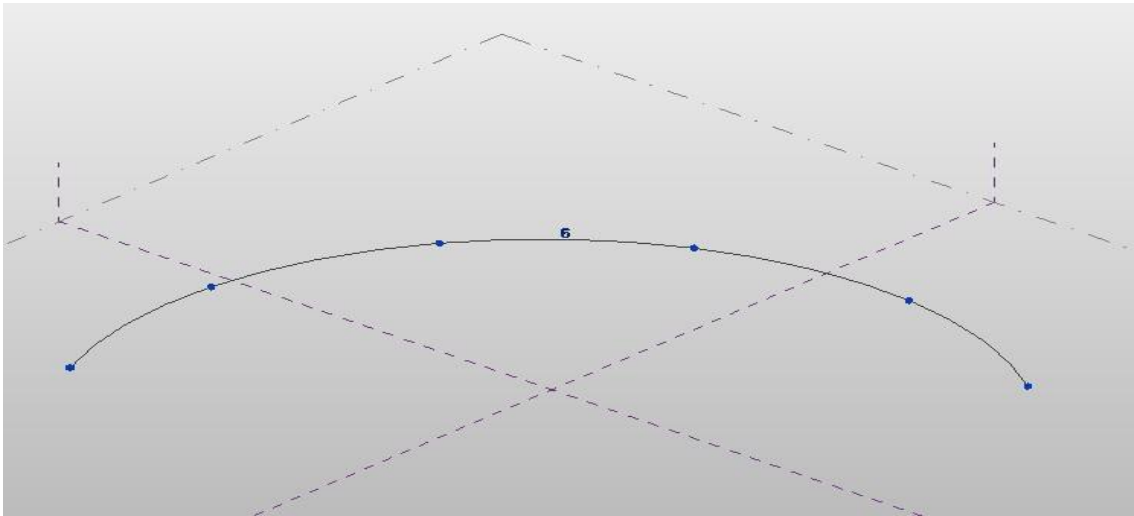
Extensions

Type Parameters	
Parameter	Value
Construction ^	
Railing Height	3' 6"
Rail Structure (Non-Continuous)	Edit...
Baluster Placement	Edit...
Baluster Offset	-0' 1"
Use Landing Height Adjustment	No
Landing Height Adjustment	0' 0"
Angled Joins	Add Vertical/Horizontal Segments
Tangent Joins	Extend Rails to Meet
Rail Connections	Trim

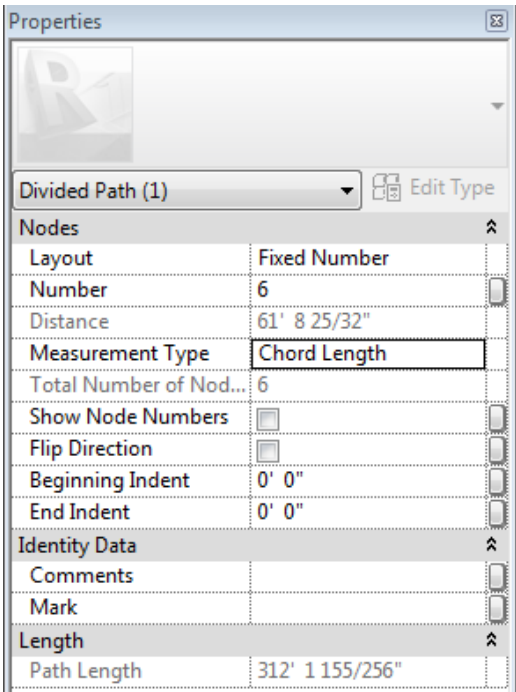
Conceptual Design Environment



Division placement

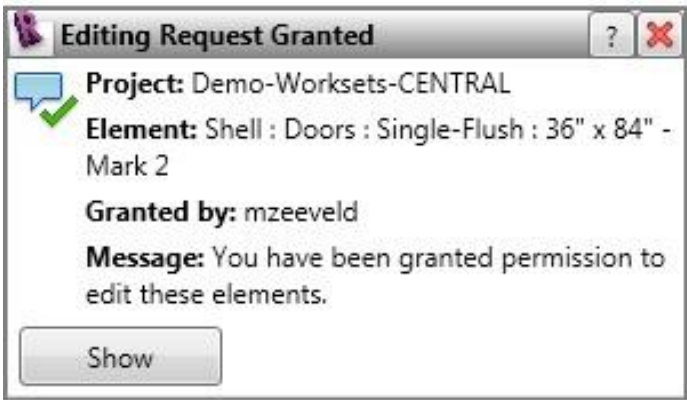


Node edges

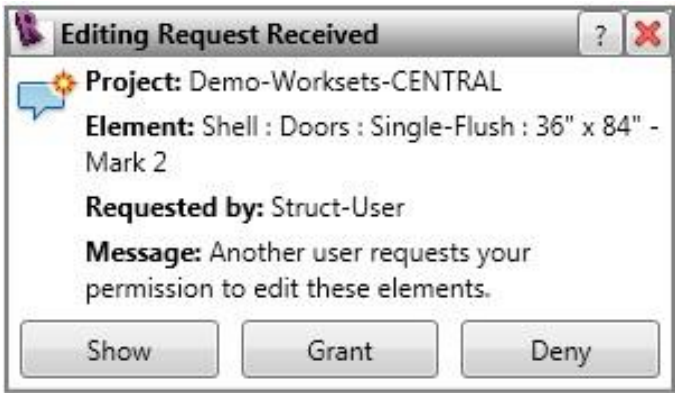
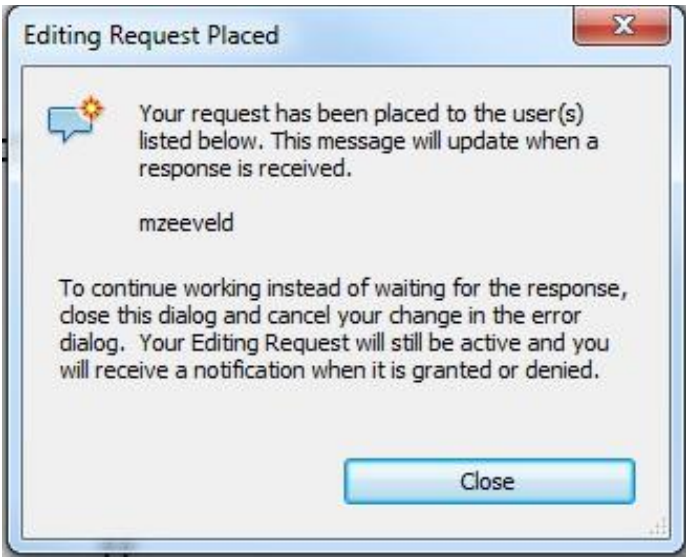


Worksharing Enhancements

Edit request

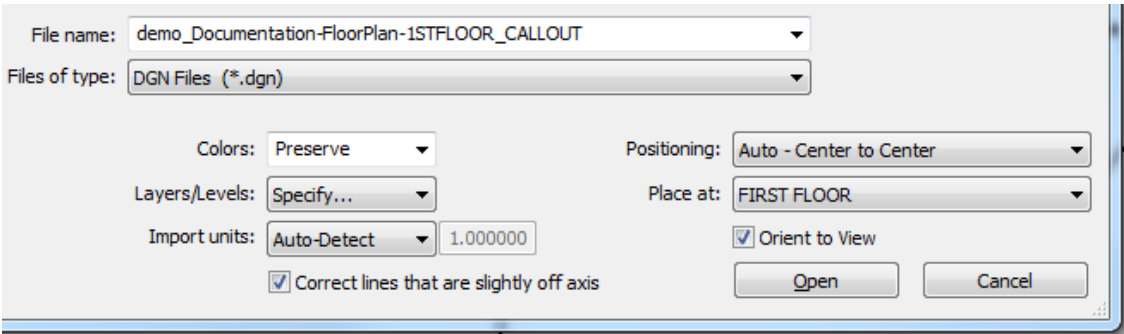


Dynamic Interactive Notifications



Import

DGN

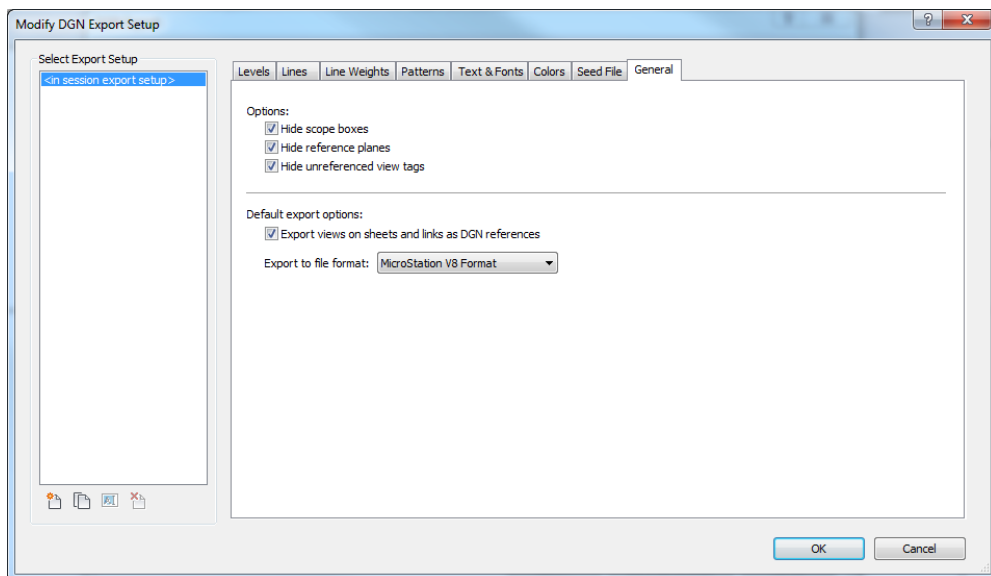


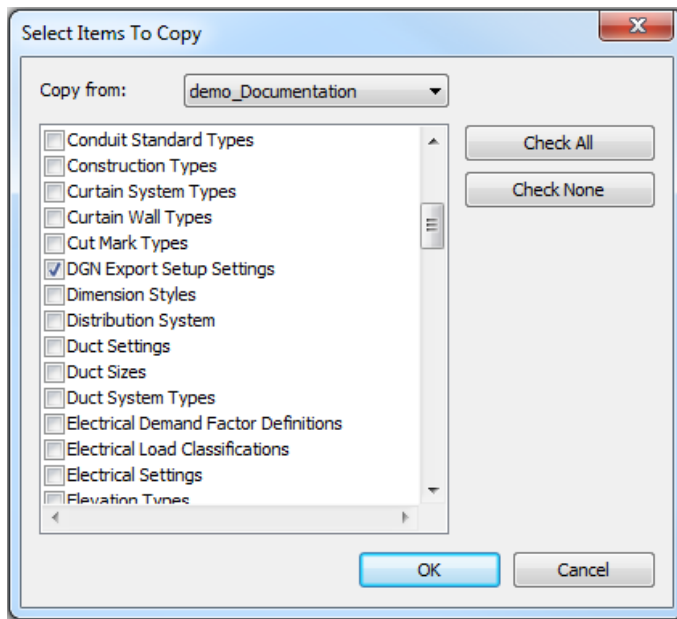
V8 support

Export

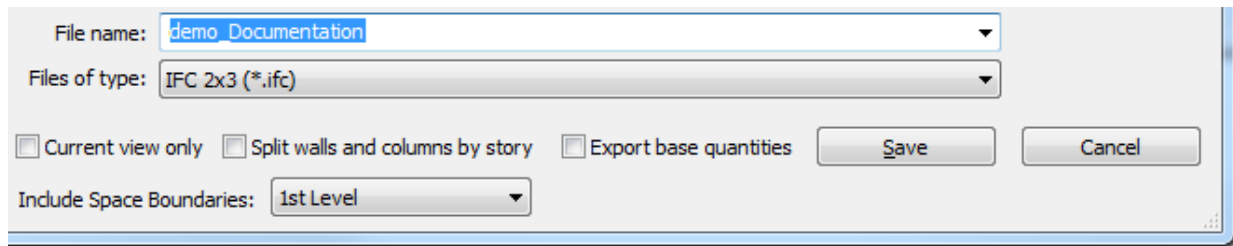
DGN

- Additional Mapping Functionality
- V8 Support
- Save Setups
- Project Transfer







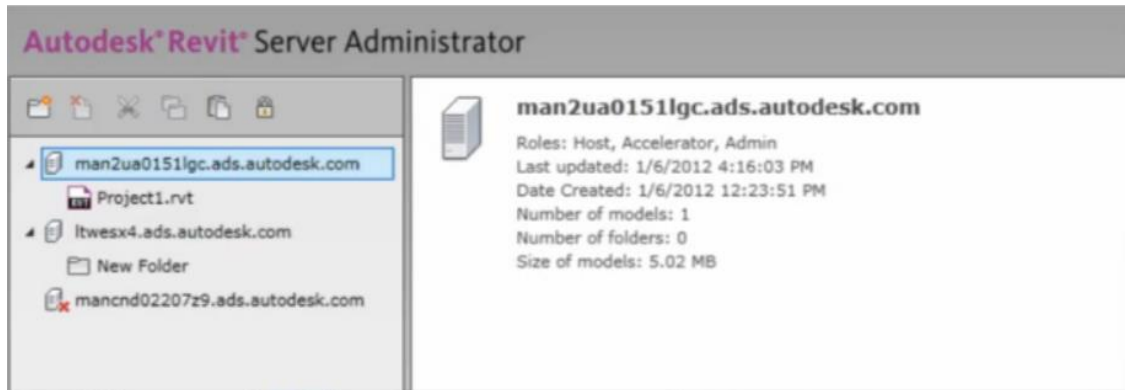
IFC: Import / Export



- Reduced surfaces
- Better Performance
- More elements supported
 - Assemblies
 - Parts
 - Curtain walls on massing elements
- Reduced file size

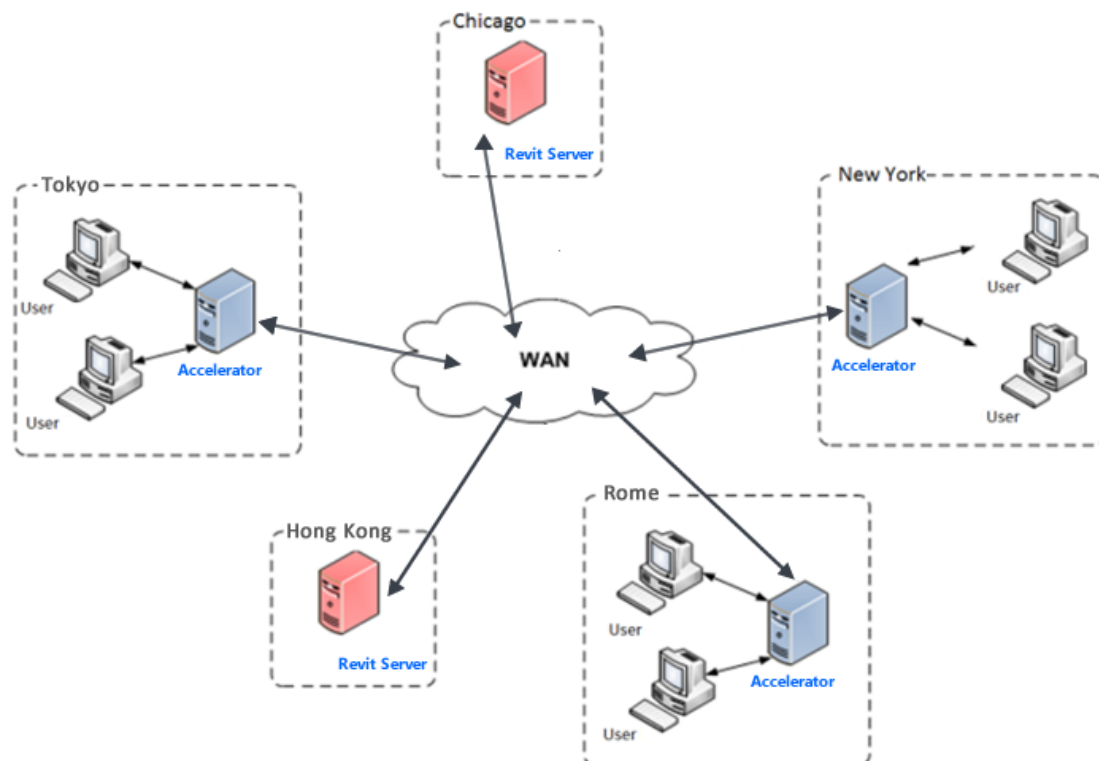
Name	Type	Size
 demo_Documentation	Revit Project	37,428 KB
 demo_Documentation	IAI Industry Foundation Classes File	27,784 KB

Revit Server



Multiple Host Servers

- Administrator tools
- Reduced locks
- Vault



Visualization

- Image background
- Sky



Realistic Foliage Display

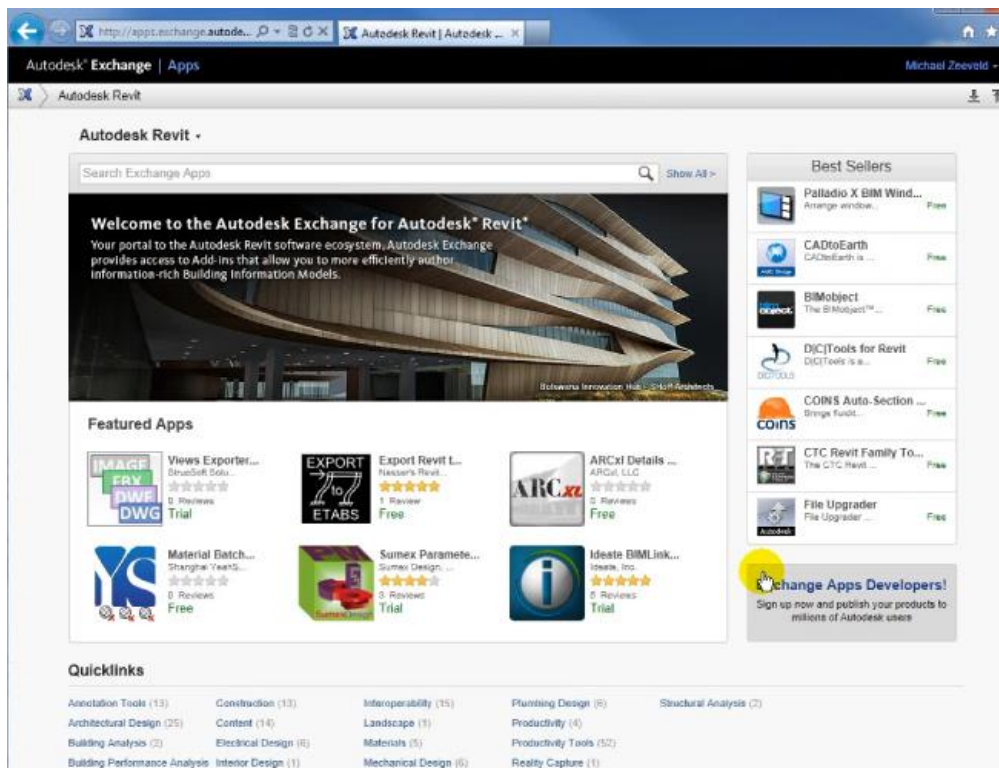
RPC





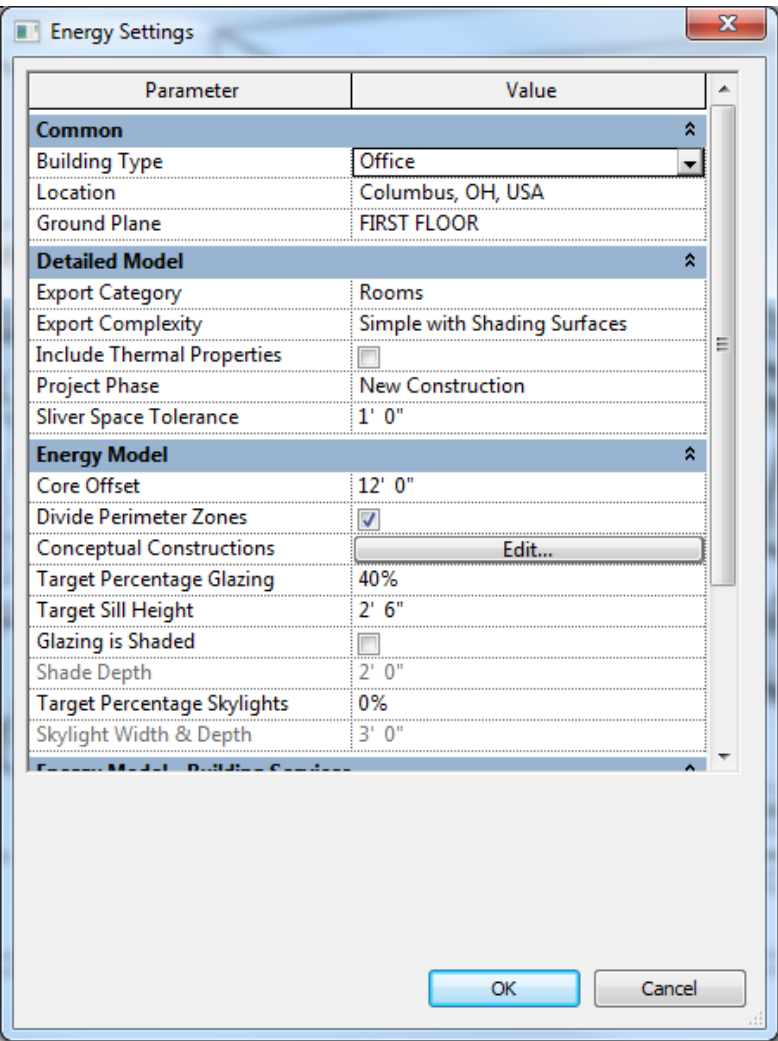
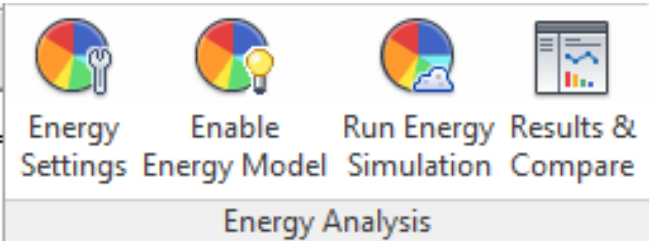
Exchange Apps

<http://apps.exchange.autodesk.com>

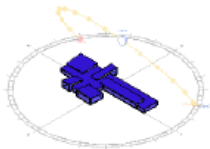


Autodesk 360 ~ Cloud

Analysis



Reporting



Building Performance Factors

Location:	Atlanta, GA, USA
Weather Station:	41715
Outdoor Temperature:	Max: 95°F/Min: 17°F
Floor Area:	19,308 sf
Exterior Wall Area:	15,208 sf
Average Lighting Power:	1.01 W / ft²
People:	63 people
Exterior Window Ratio:	0.58
Electrical Cost:	\$0.09 / kWh
Fuel Cost:	\$1.05 / Therm

Energy Use Intensity

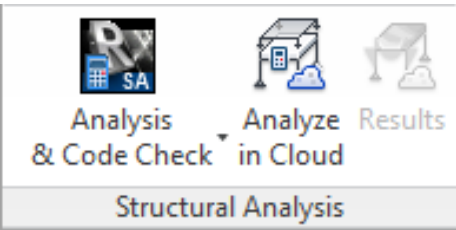
Electricity EUI:	14 kWh / sf / yr
Fuel EUI:	21 kBtu / sf / yr
Total EUI:	69 kBtu / sf / yr

Life Cycle Energy Use/Cost


Life Cycle Electricity Use:	8,156,526 kWh
Life Cycle Fuel Use:	119,648 Therms
Life Cycle Energy Cost:	\$393,097

*30-year life and 6.1% discount rate for costs

Structural







Dashboard / Projects / AU2012_advanced_sample_project / New Analysis



Analysis powered by Robot Structural Analysis engine

Project: AU2012_advanced_sample_project
Model: AU2012_Model 1

Static analysis

Analysis name AU2012_Analysis  <small>Add comment</small>	Report template Simple report  Report name Report 1	Analysis profile Normal  Self-weight options <input checked="" type="radio"/> Add to existing load case DL1  <input type="radio"/> Ignore
---	---	--

Start Analysis

360 Cloud

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Create Account



What is Autodesk® 360?

Autodesk 360 is a cloud-based platform that gives you access to storage, a collaboration workspace, and cloud services to help you dramatically improve the way you design, visualize, simulate, and share your work with others anytime, anywhere.

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Features & Services

Get 30GB of free storage and a workspace to collaborate simply by creating an account. If you have an Autodesk product subscription, you can access additional powerful functionality only available on Autodesk 360, including new features for BIM!

[Learn More](#)

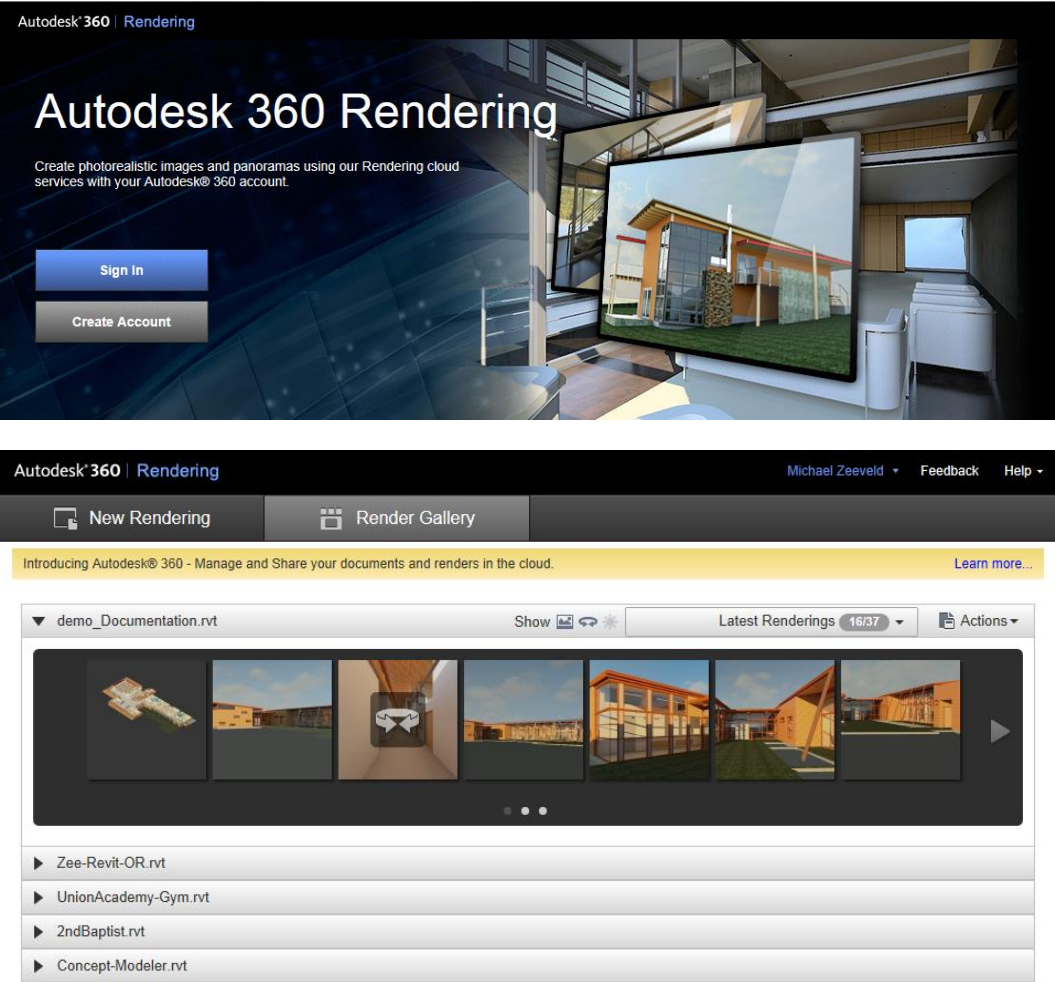
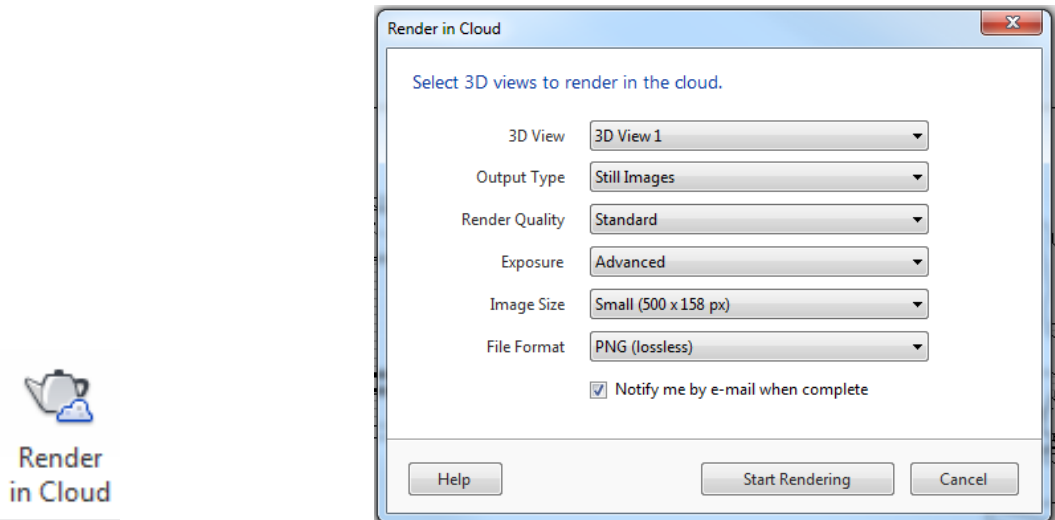
Secure and Reliable Tools

Autodesk® offers secure access to design files so customers can work and share designs confidently. We invest heavily in the security and reliability of the Autodesk 360 platform to protect and back-up your work.

[Learn More](#)

- Collaboration
- Sharing
- Editing

Rendering



Additional Resources

- F1 Help
- Autodesk Wikihelp <http://wikihelp.autodesk.com/Revit/enu/2013>
- Autodesk Channel <http://www.youtube.com/user/autodesk>

Autodesk® WikiHelp
Product help with community knowledge

Feedback English Sign in Help

Search Revit Revit 2013

Home > Revit > English > 2013 Print Lists Share

Revit 2013

Online help for Revit, Revit Architecture, Revit Structure, and Revit MEP

Betzwan Innovation Hub - SHoP Architects

Community Learning

1 Find and share information.

2 Contribute knowledge.

How to add your knowledge

Browse Help

- Revit Help
- New in Revit 2013
- Technical Support
- Video Galleries
- More Information
- API Developer's Guide
- Creating Loadable Families

Add Knowledge

- Articles
- Curriculum
- Examples
- Links and Resources
- Sandbox
- Tips and Tricks
- Troubleshooting
- Tutorials
- Videos

Most Popular

Tutorials	99139 views
New in Revit 2013	77610 views
Tips and Tricks	38587 views
Building a Revit Template	28622 views
Autodesk® Revit® System Requirements and Recommendations	26564 views
Placing Duct	26234 views
2011 Revit Architecture - Video Tutorials 1/3 - Getting Started (ENU)	21363 views

Summary

You will be able to:

Be familiar with the new features, concepts and benefits of Building Information Modeling.

Understand the fundamental concepts and features of Autodesk Revit Architecture 2013.

Use the parametric 3D design tools to start designing projects.

Develop an initial level of comfort and confidence with the new tools in Autodesk Revit Architecture 2013 through hands-on experience.