



AB1356 - Autodesk® Revit® Architecture 2014 New Features

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Senior Application Specialist – Southeast Territory



Class summary

- Learn about the exciting new features in Autodesk Revit Architecture 2014 software. Get introduced to new concepts of Building Information Modeling (BIM) and efficient, easy-to-use tools for parametric design and documentation.

Key learning objectives

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

- Describe the new features, concepts, and benefits of Building Information Modeling
- Explain the fundamental concepts and features of Autodesk Revit Architecture
- 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

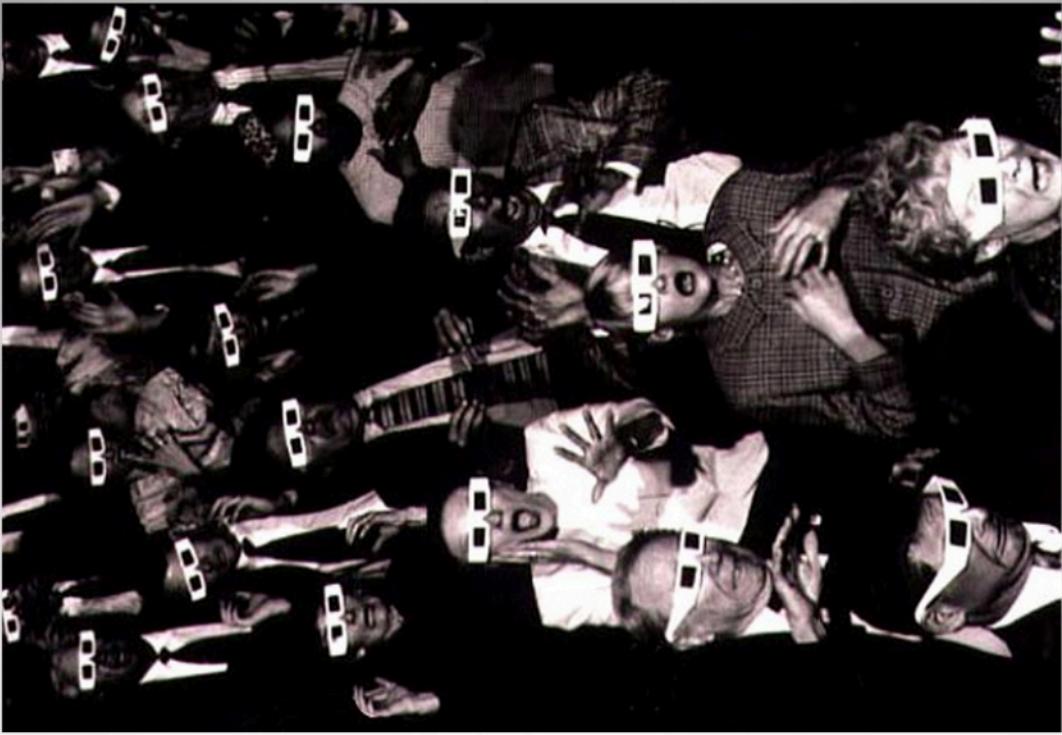
Welcome!

- Glad you are part of the Lecture



Housekeeping

- 60 Minute Lecture
- Please turn your mobile device to silent mode
- Who is in the audience?
- What do you hope to get out of this class?



Speaker Bio

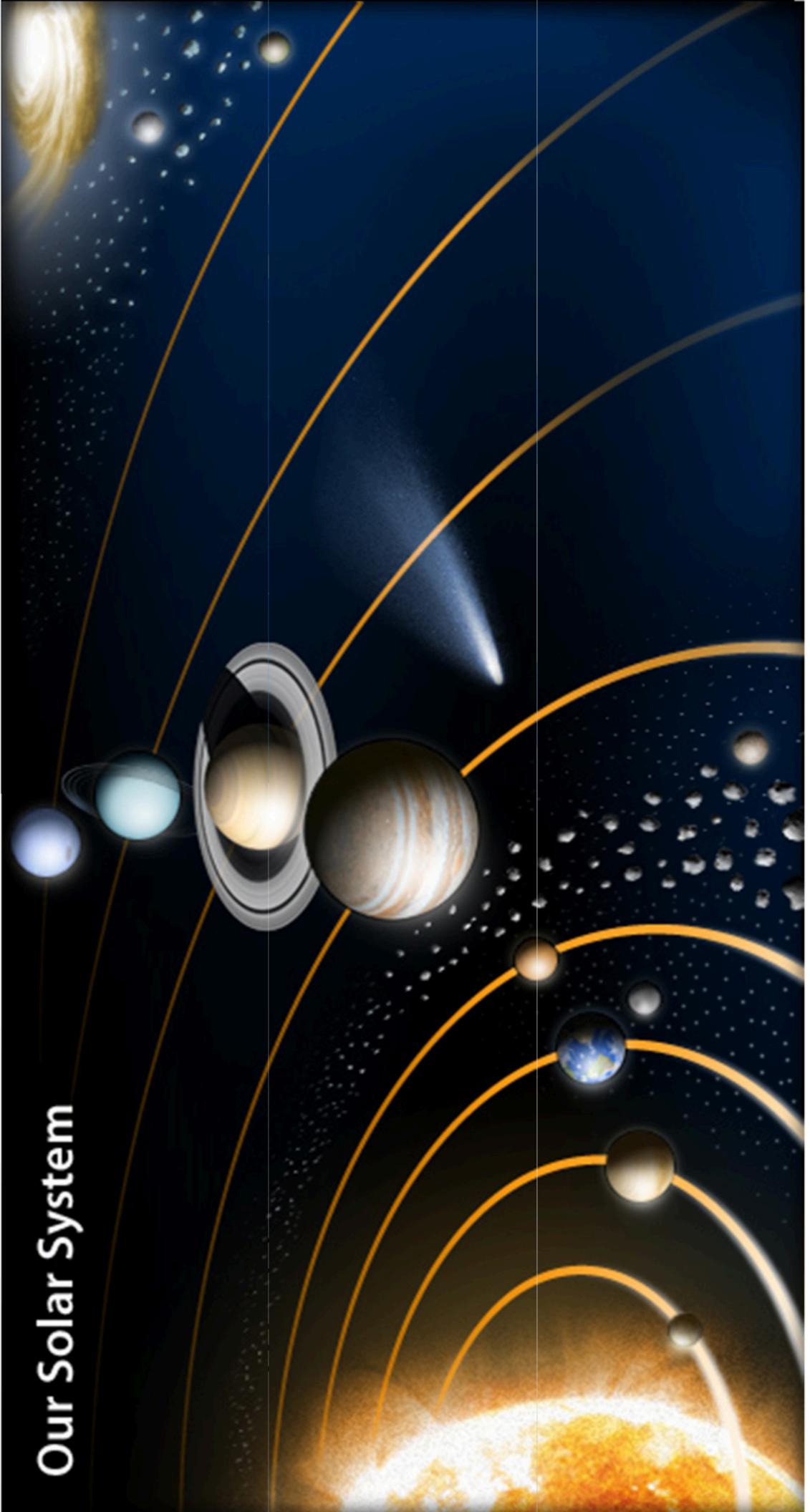
Michael “Zee” Zeeveld, ASSOC. AIA , ACI

- Senior Application Specialist, Applied Software – Atlanta, GA
 - 18 years of AEC Experience
 - Autodesk Revit Certified Professional
 - Autodesk Consulting Specialization
 - Autodesk Structural Specialization
 - Autodesk 3ds Max Design Certified Associate
- Speaker at AU 2006, 2010, 2012 and 2013
 - Presenter at AUGI CAD Camp and AIA
 - Speaker at RTC – Revit Technology Conference 2012
 - Certified Autodesk Instructor



Autodesk®
Certified Instructor

Our Solar System

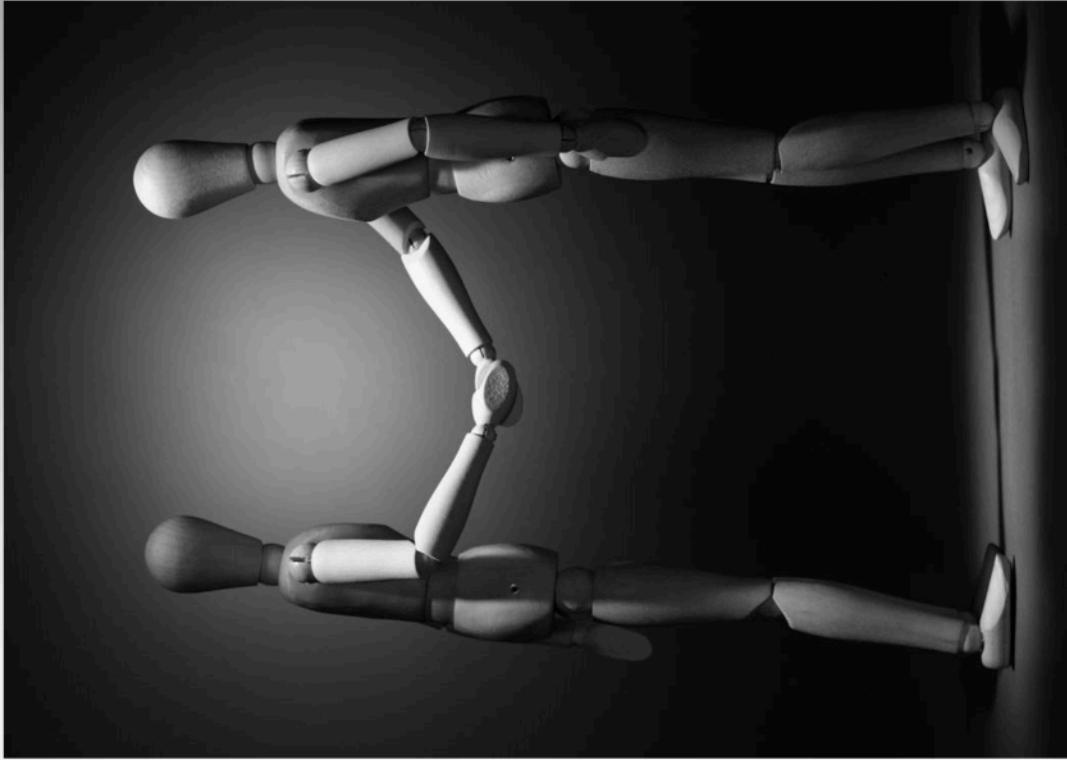


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Say Hello

- Meet your neighbor



Topics

- Non-rectangular crop regions
- Element selection toggles
- Displace Element
- Split segment
- “Use Optimized View Navigation”
- Schedules enhancements
- Temporary view properties

New Features

New Features

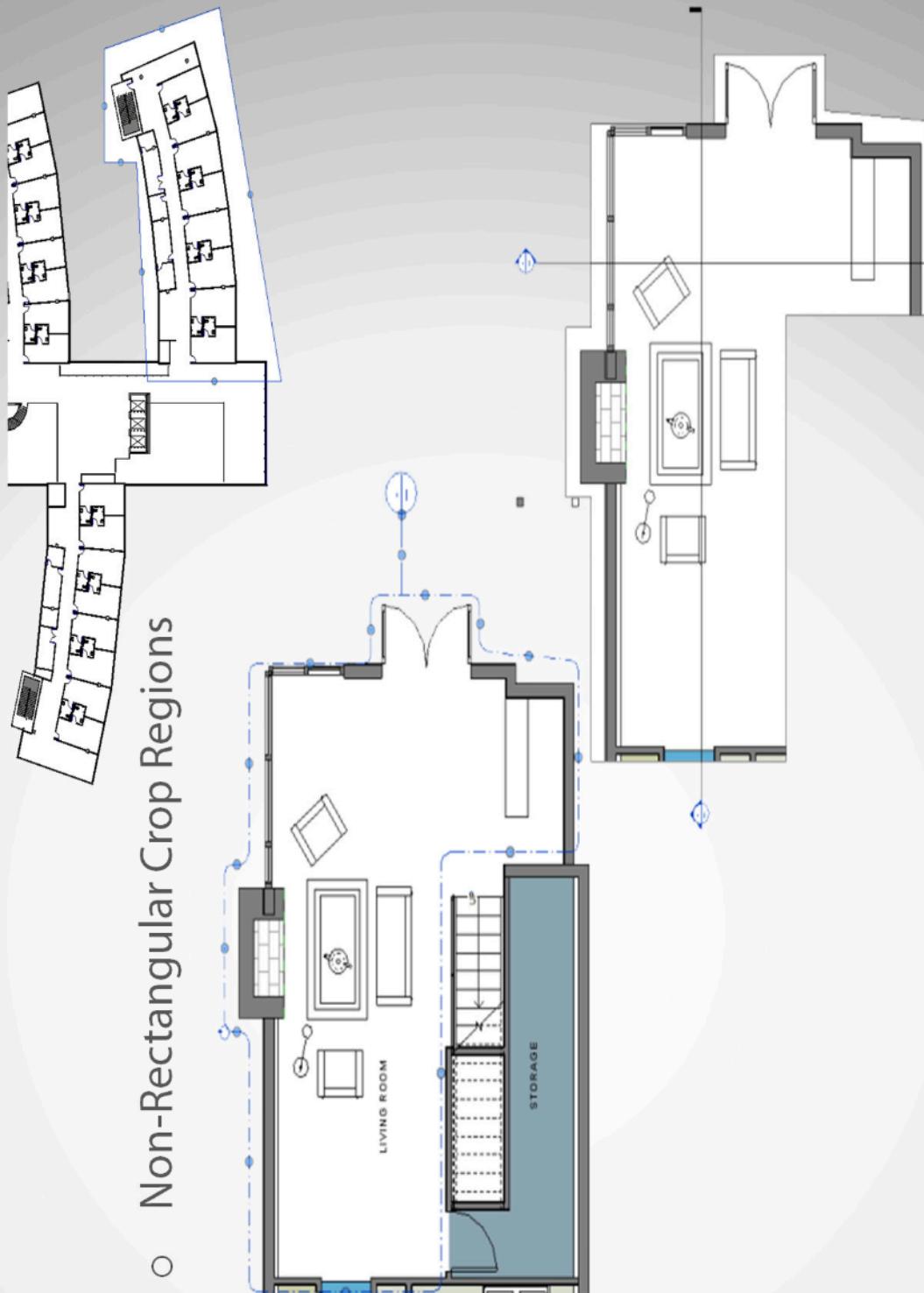
- **Non-Rectangular Crop Regions**
 - Reference and crop regions of arbitrary shape
 - More efficient documentation layout
 - Easier presentation of referenced model areas

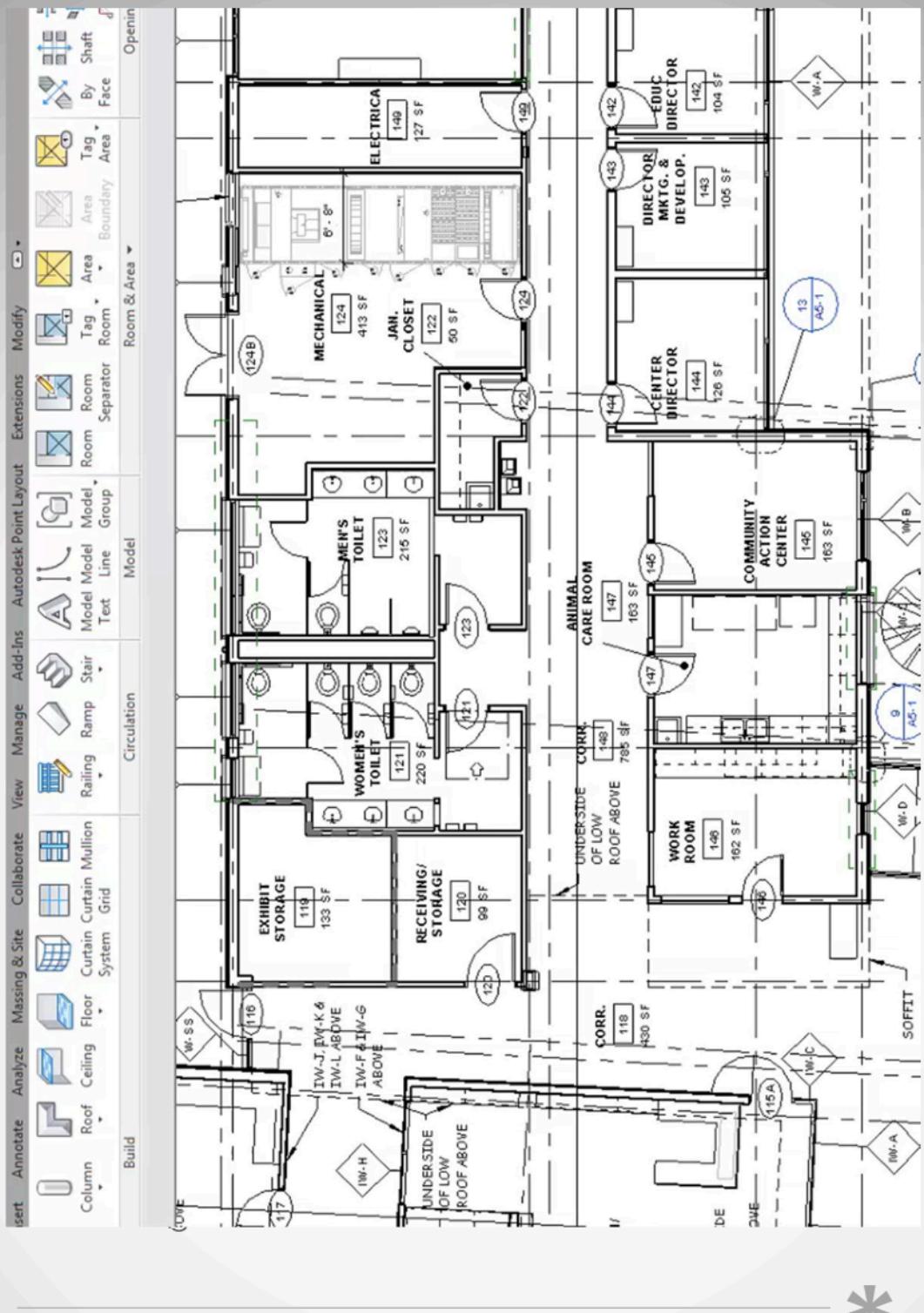


New Features

Non-Rectangular Crop Regions

- Non-Rectangular Crop Regions

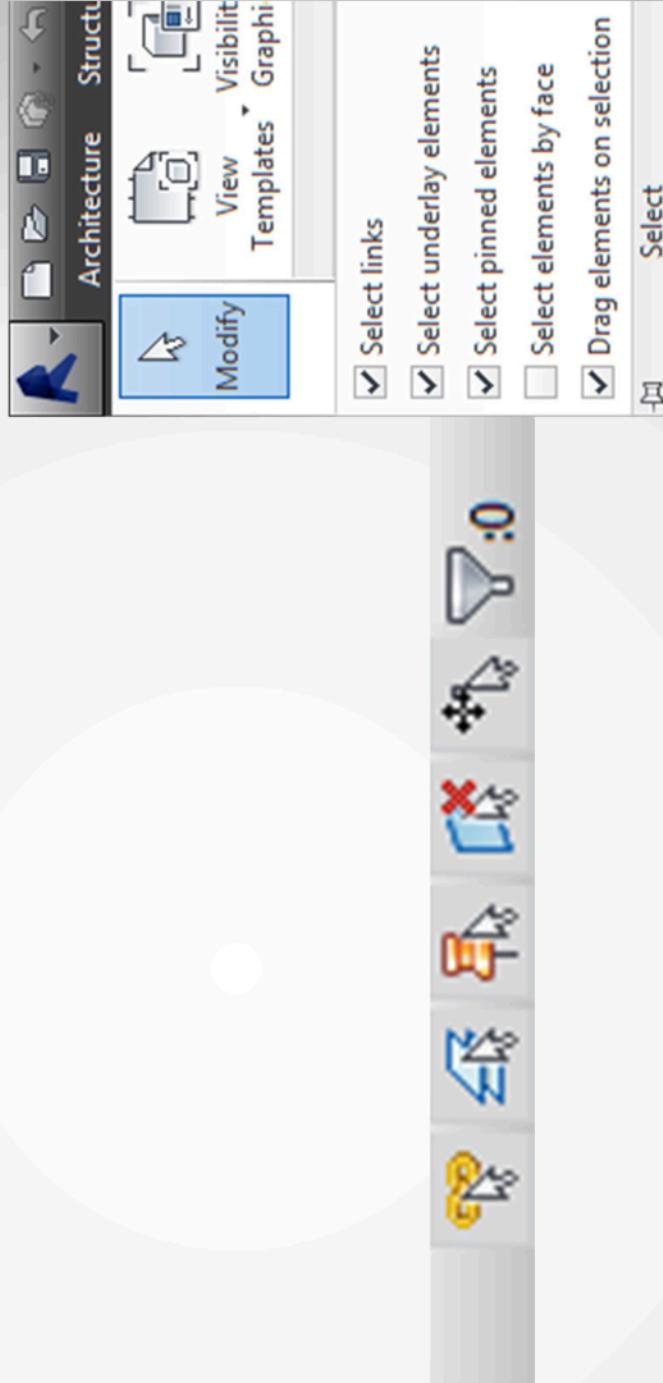


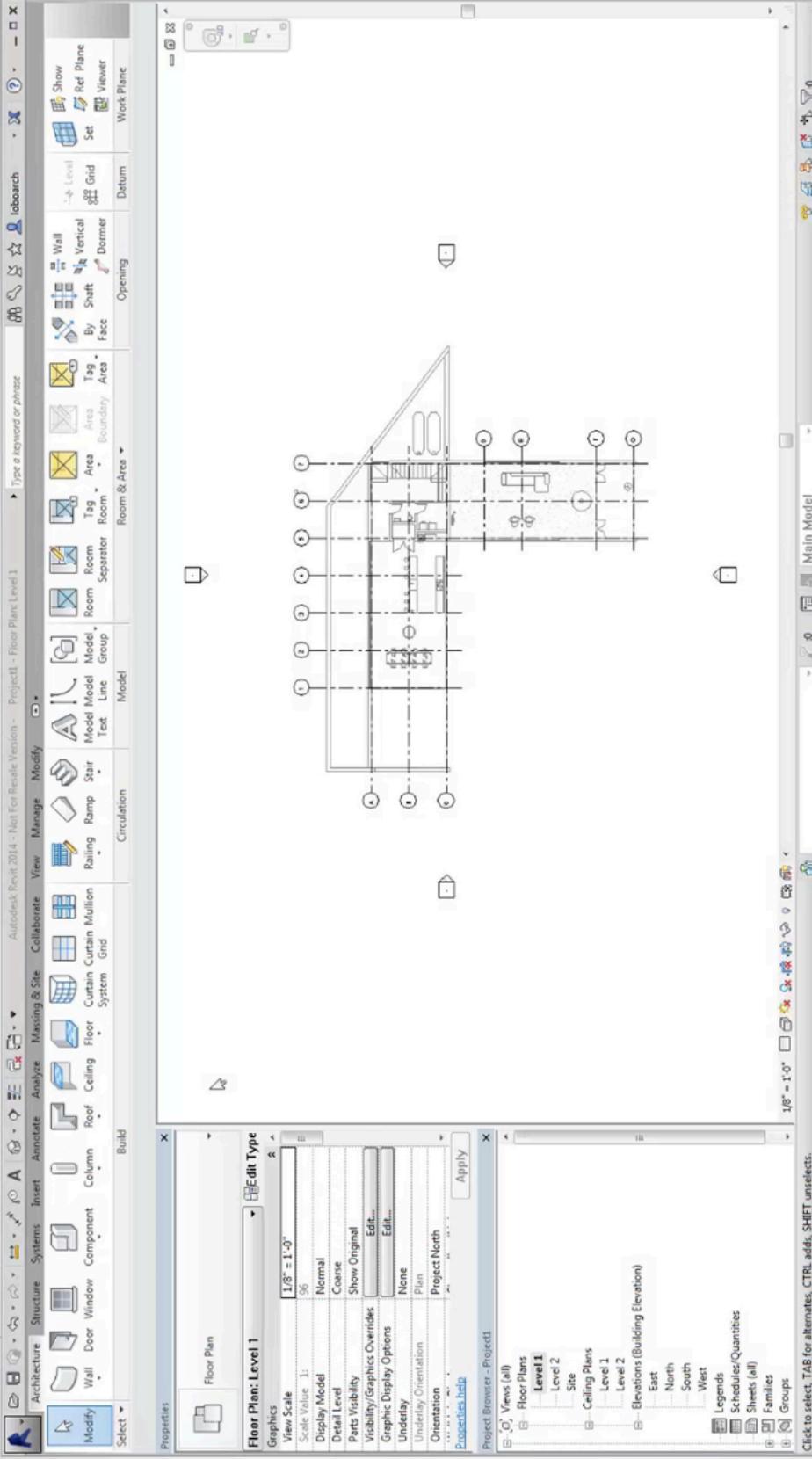


New Features

Element selection toggles

- Element selection toggles for links, underlays, pinned items, and select by faces

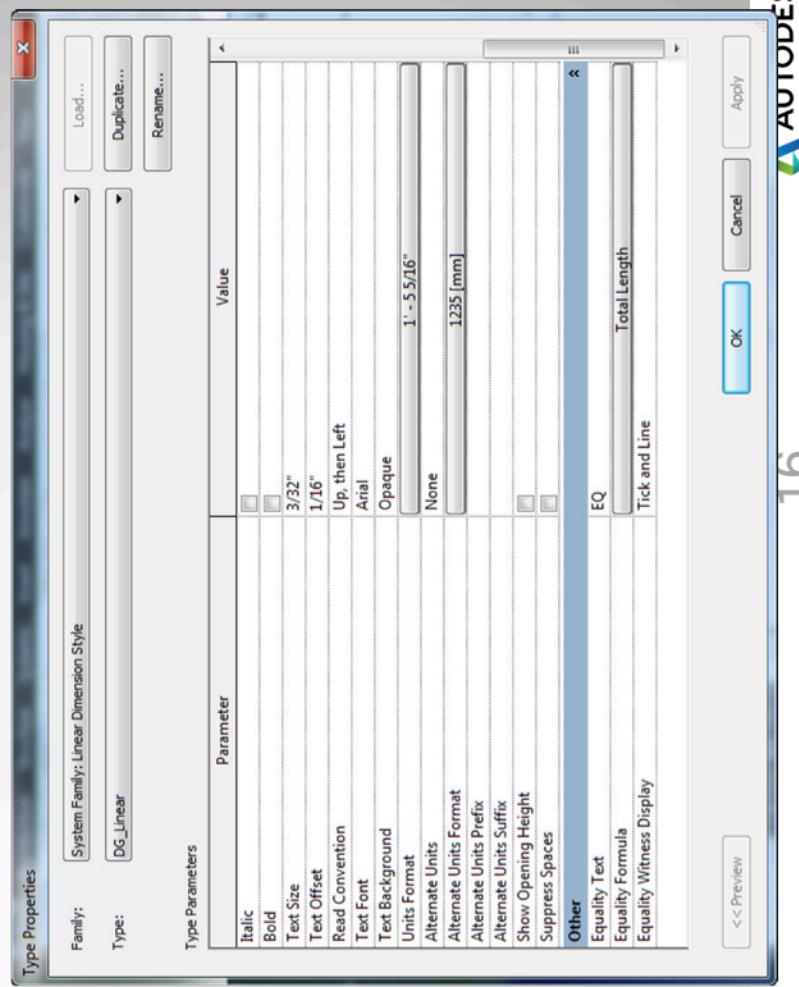


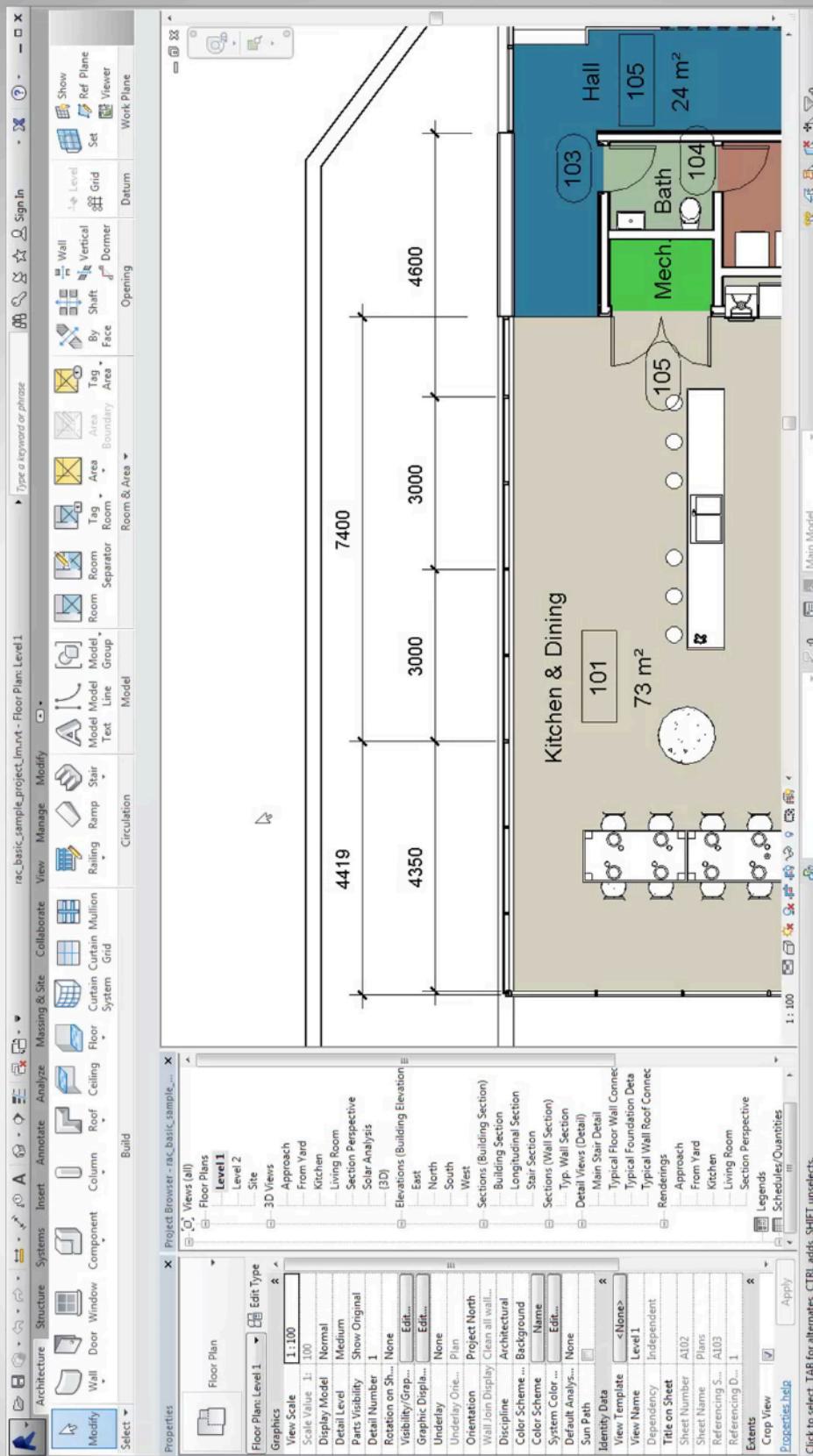


New Features toggles

New Features

- Alt. Dimensions
- Primary Dimensions
- Alternate Dimensions





New Features

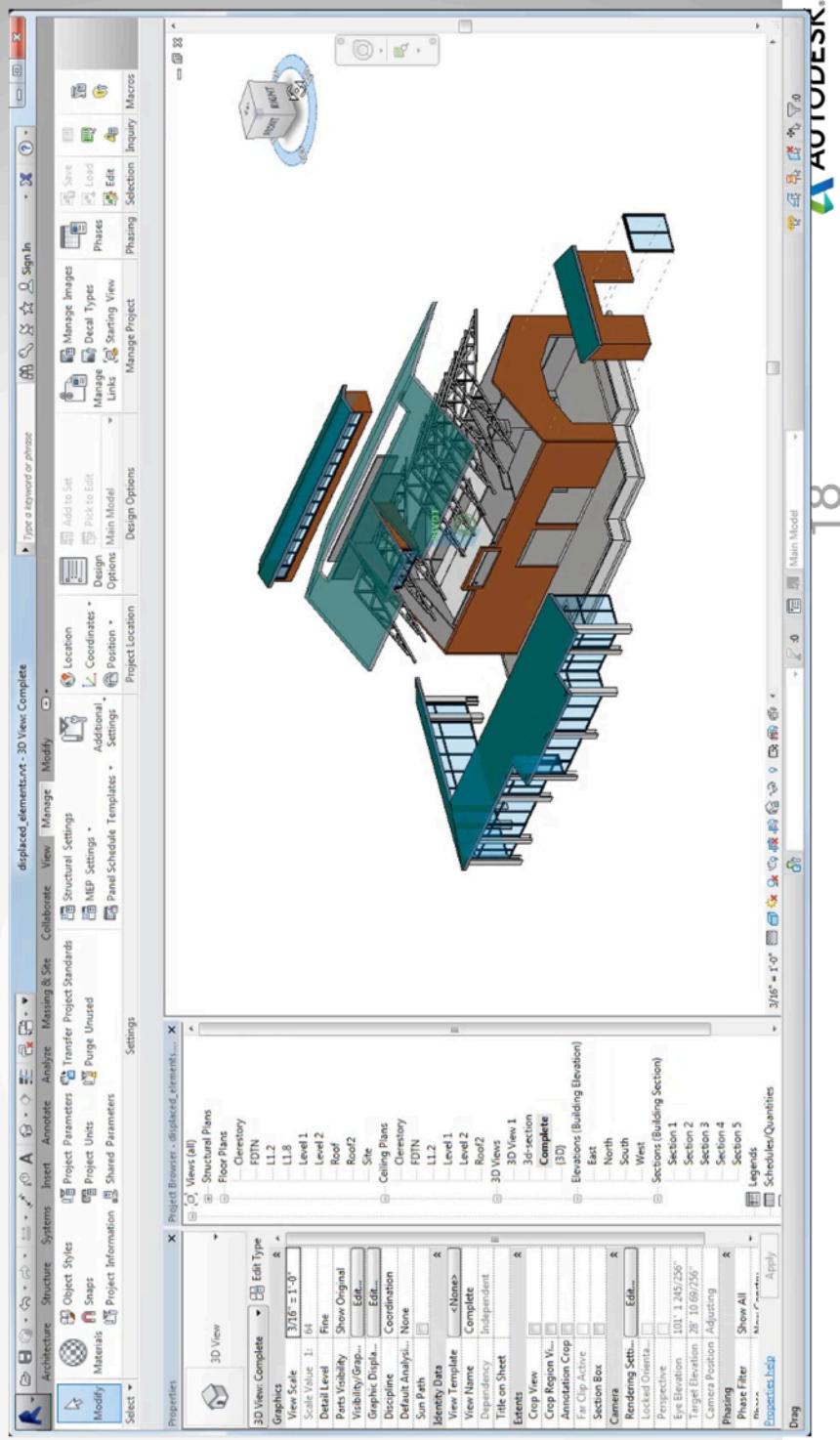
Alt. Dimensions



New Features

Displace Element

- Displace Element: new tool to create **exploded views** in any 3D view

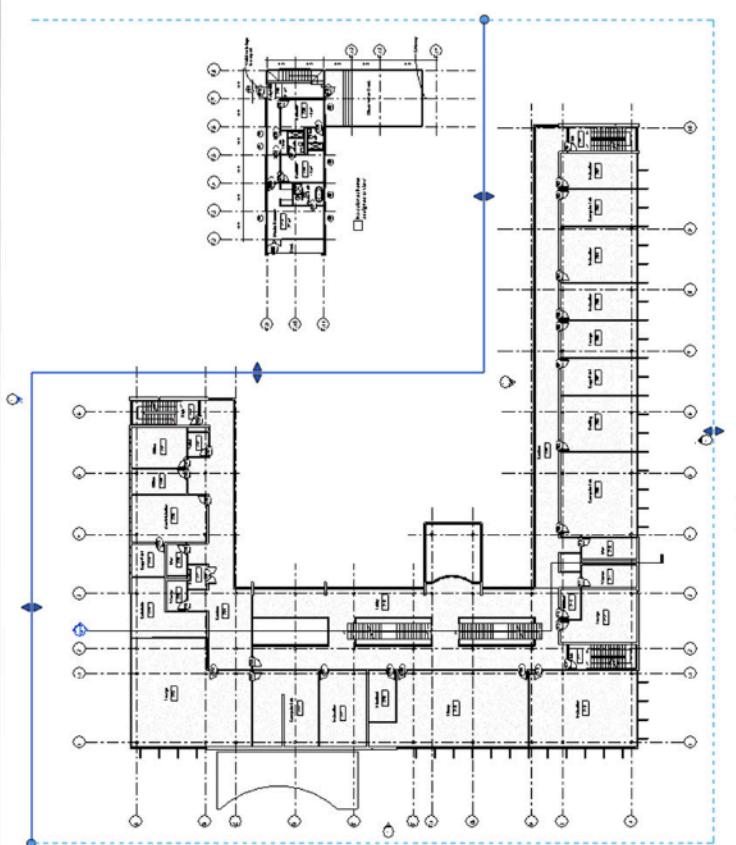


New Features

New Features

Split segment feature for elevations

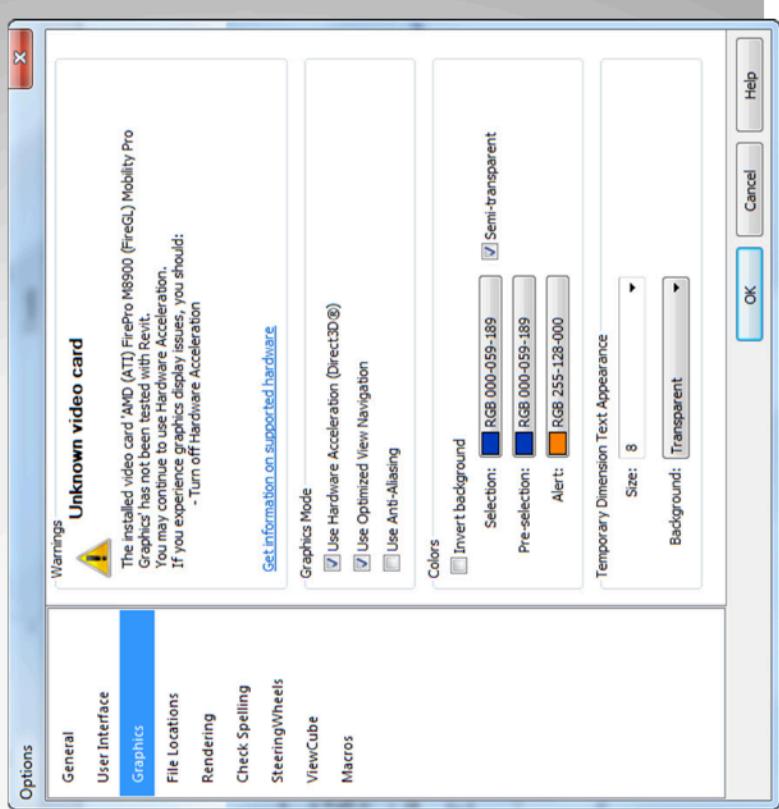
- Manage elevation cut-line configuration
- Exclude unwanted or overlapping objects in elevation



New Features

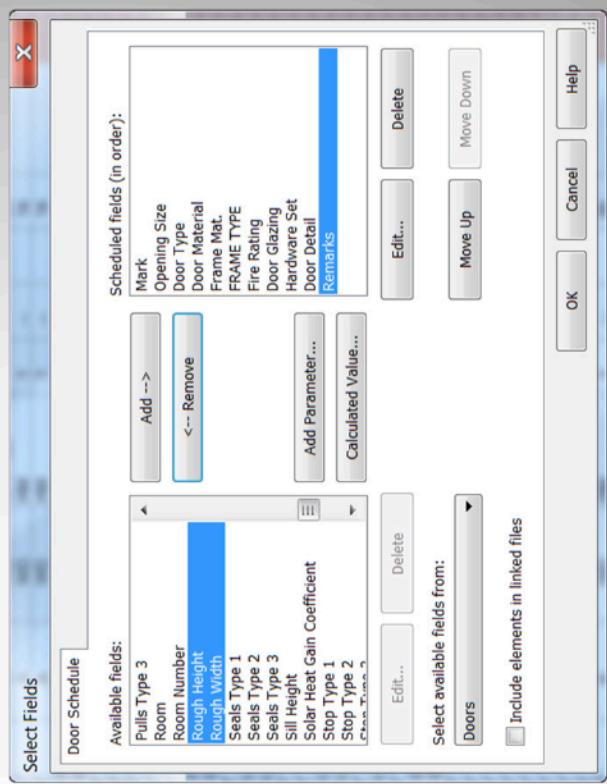
Optimized View Navigation

- “Use Optimized View Navigation” setting that significantly improves performance



New Features Schedules enhancements

- Text properties and table formatting improvements
 - Improved data access, display, and relationships
 - Ability to display graphics in schedule headers



New Features

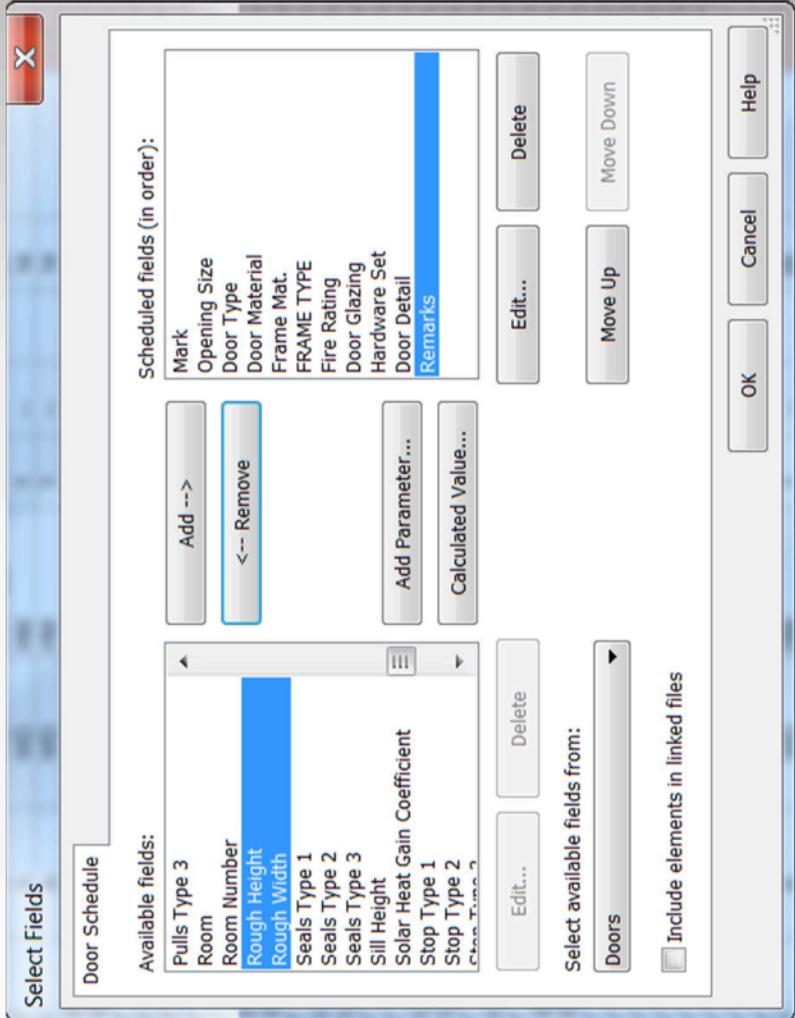
Schedules enhancements

<DOOR & FRAME SCHEDULE>													
A	B	C	D	E	F	G	H	I	J	K	L	M	
Opening No.	Opening Size (width x height)	Door Elev.	Door Mat'l.	Frame Mat'l.	Fire Rating	Glass Type	Hdwr. Set	Frame Details	Remarks	Rough Height	Rough Width		
100A	SEE ELEV.	G	WD	GYP. BD.	20				500 lbs	7'-4"			
100B	SEE ELEV.	G	WD	GYP. BD.	20				500 lbs	7'-4"			
100C	3'-0" x 7'-0"	A	HM	1	14					7'-2"	3'-4"		
100D	3'-0" x 7'-0"	A	WD	1	14					7'-2"	3'-4"		
100E	(23'-0" x 7'-0")	D	ALUM	SE									
100F	(23'-0" x 7'-0")	D	ALUM	ALUM									
101A	3'-0" x 7'-0"	B	WD	HM	1	14	17			7'-2"	3'-4"		
101B	3'-0" x 7'-0"	B	WD	HM	1	24				7'-2"	3'-4"		
102A	3'-0" x 7'-0"	A	WD	HM	1	02				7'-2"	3'-4"		
102B	3'-0" x 7'-0"	A	WD	HM	1	02				7'-2"	3'-4"		
102D	3'-0" x 7'-0"	A	HM	HM	1	26				7'-2"	3'-4"		
103A	(23'-0" x 7'-0")	A	HM	HM	1	27				7'-2"	6'-4"		
104	(23'-0" x 7'-0")	D	ALUM	SE	17								
106A	3'-0" x 7'-0"	D	ALUM	SE	13								
106B	SEE ELEV.	F	WD	GYP. BD.	20				300 lbs	7'-4"			
106C	SEE ELEV.	F (SIM.)	WD	GYP. BD.	20				550 lbs	7'-4"			
107	3'-0" x 7'-0"	D	ALUM	SE	---								
108A	3'-0" x 7'-0"	I	ALUM	ALUM	SE	---							
108B	SEE ELEV.	F	WD	GYP. BD.	20				300 lbs	7'-4"			
108C	SEE ELEV.	F (SIM.)	WD	GYP. BD.	20				550 lbs	7'-4"			
109	3'-0" x 7'-0"	A	HM	1	01					7'-2"	3'-4"		
110A	SEE ELEV.	H	WD	GYP. BD.						9'-2"	4'-4"		
110B	3'-0" x 7'-0"	I	ALUM	ALUM	SE	13							
112	(23'-0" x 7'-0")	D	ALUM	ALUM	SE	19							
113	(23'-0" x 7'-0")	D	ALUM	ALUM	SE	18							
115A	3'-0" x 7'-0"	D	WD										
115B	3'-0" x 7'-0"	D	WD										
116	3'-6" x 7'-0"	D	ALUM	ALUM	SE	11							
117	3'-0" x 7'-0"	D	WD	HM	1	25							
119	3'-0" x 7'-0"	A	WD	HM	1	08				7'-2"	3'-10"		
120	3'-0" x 7'-0"	A	WD	HM	1	03				7'-2"	3'-10"		
121	3'-0" x 7'-0"	A	WD	HM	1	05				7'-2"	3'-4"		
122	3'-0" x 7'-0"	A	WD	HM	1	03				7'-2"	3'-4"		
123	3'-0" x 7'-0"	A	WD	HM	1	05				7'-2"	3'-4"		
124	3'-0" x 7'-0"	B	WD	HM	1	07			2	7'-2"	3'-4"		
124B	(23'-0" x 7'-0")	A	HM	HM	1	22				7'-2"	6'-4"		
125	3'-11" x 7'-11"	N	WN	ALIM	SF	na							

New Features

Schedules enhancements

- Schedules enhancements

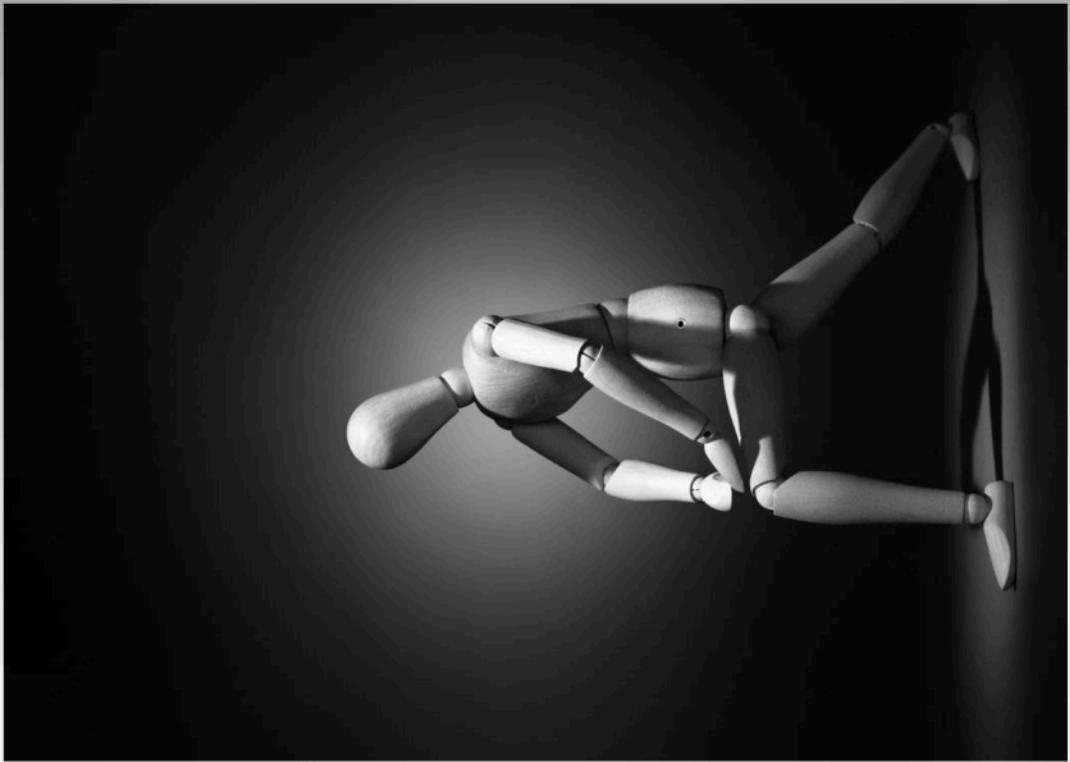


New Features	Schedule	Enhancements
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Stretch

- Get up and stretch out!



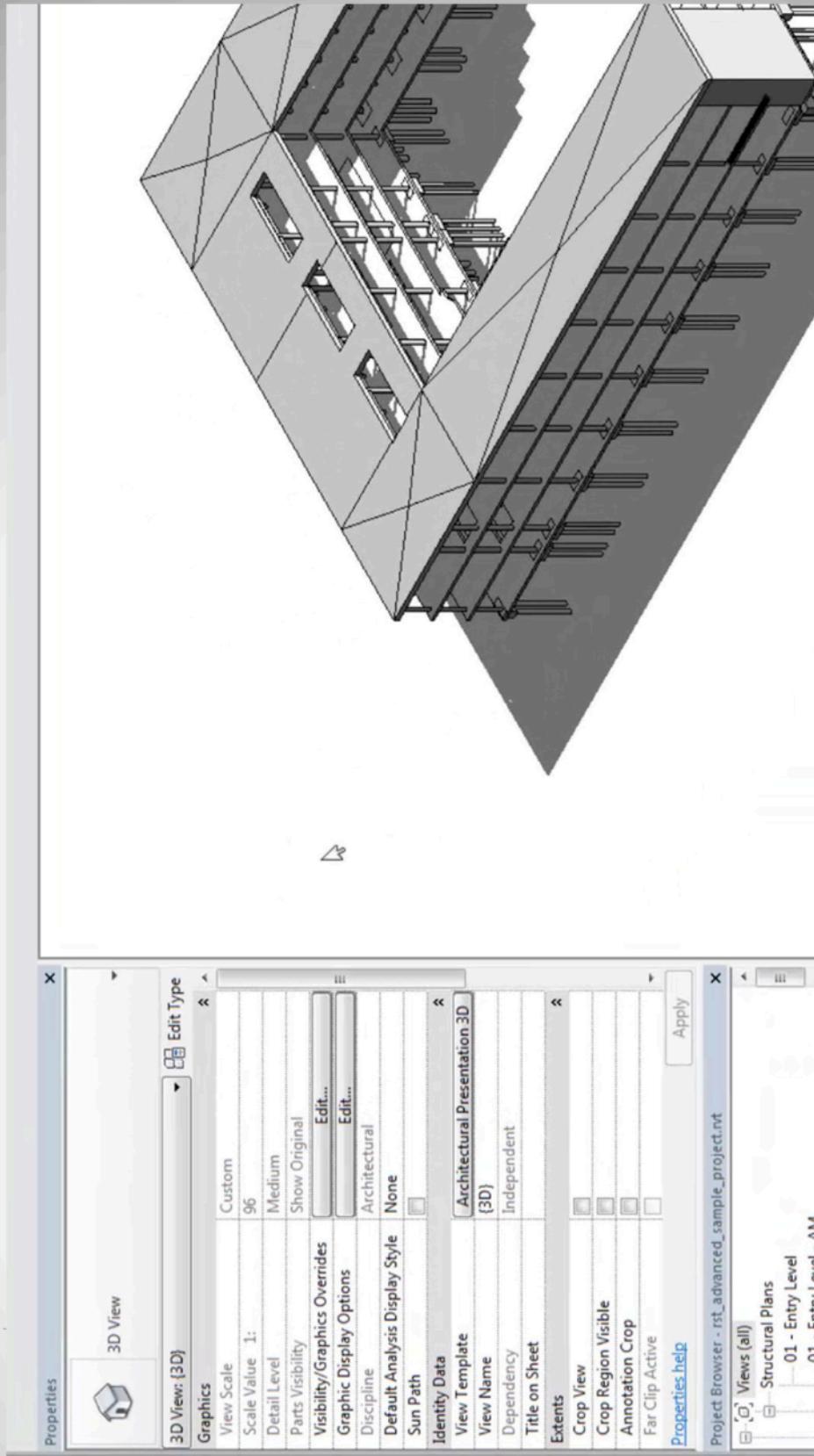
New Features

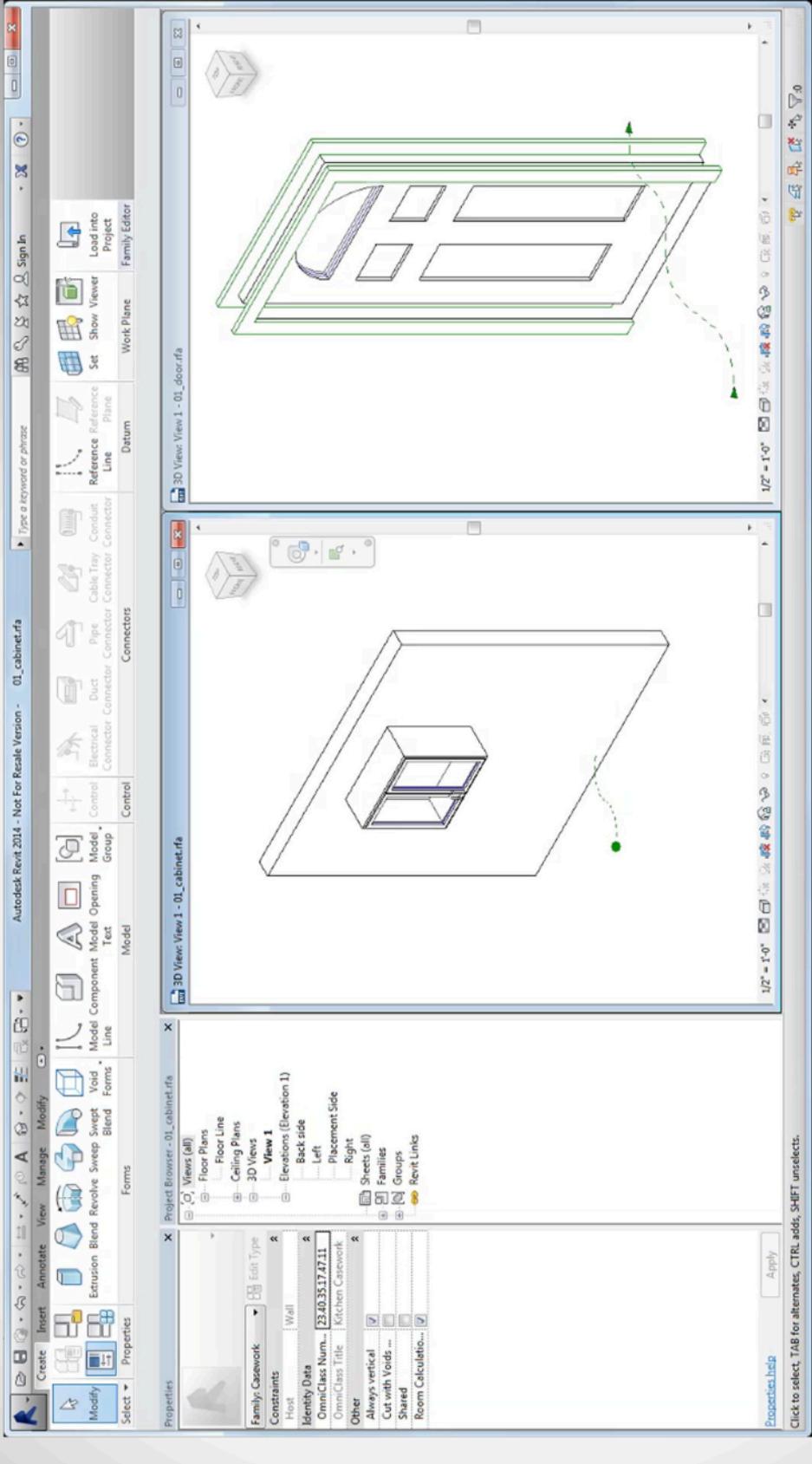
Temporary view properties

- Temporary view properties, especially nice for views with a fixed View Template
-

New Features

Temporary view properties





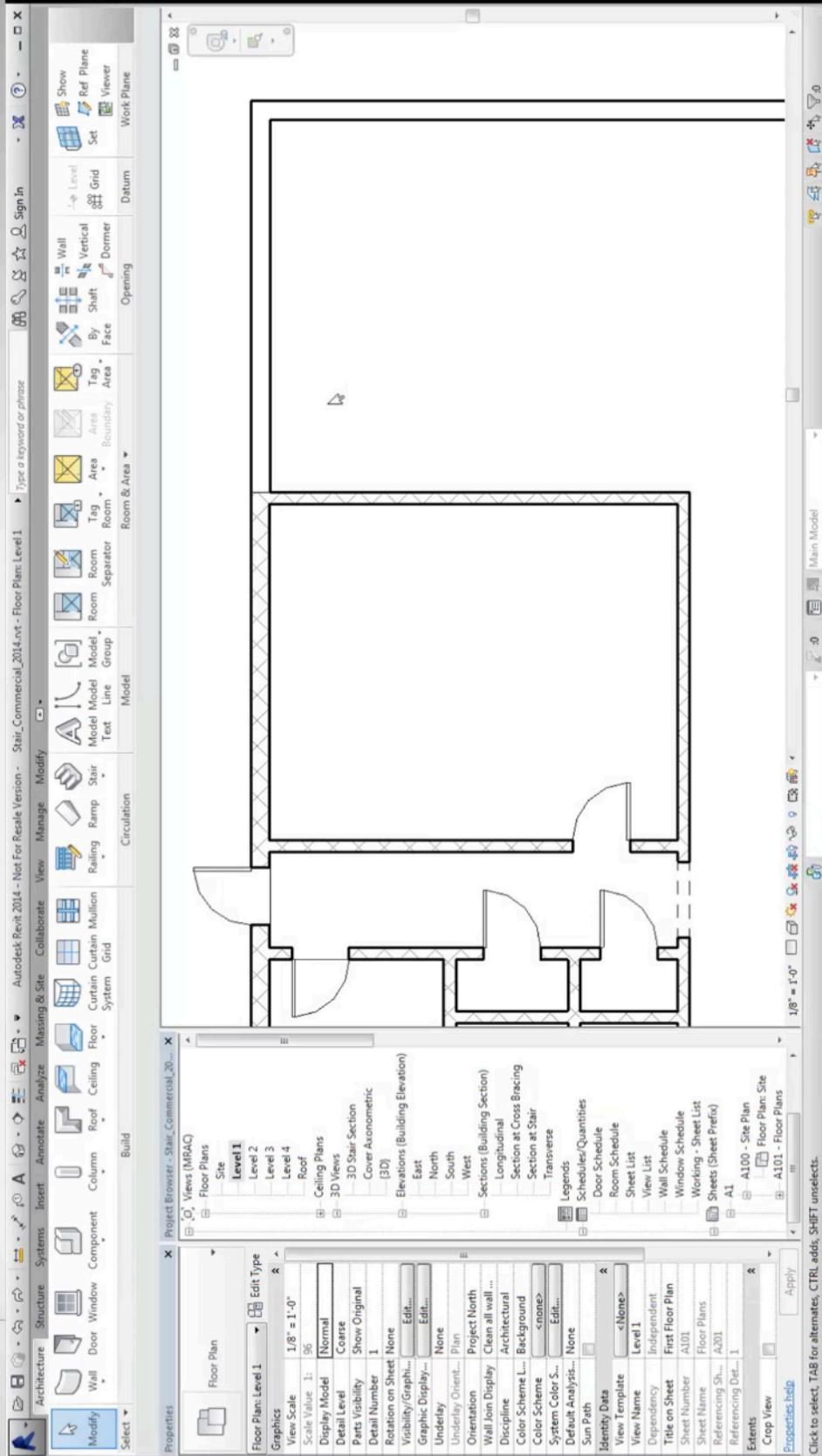
New Features

Room Calculations



New Features

Stairs



New Features

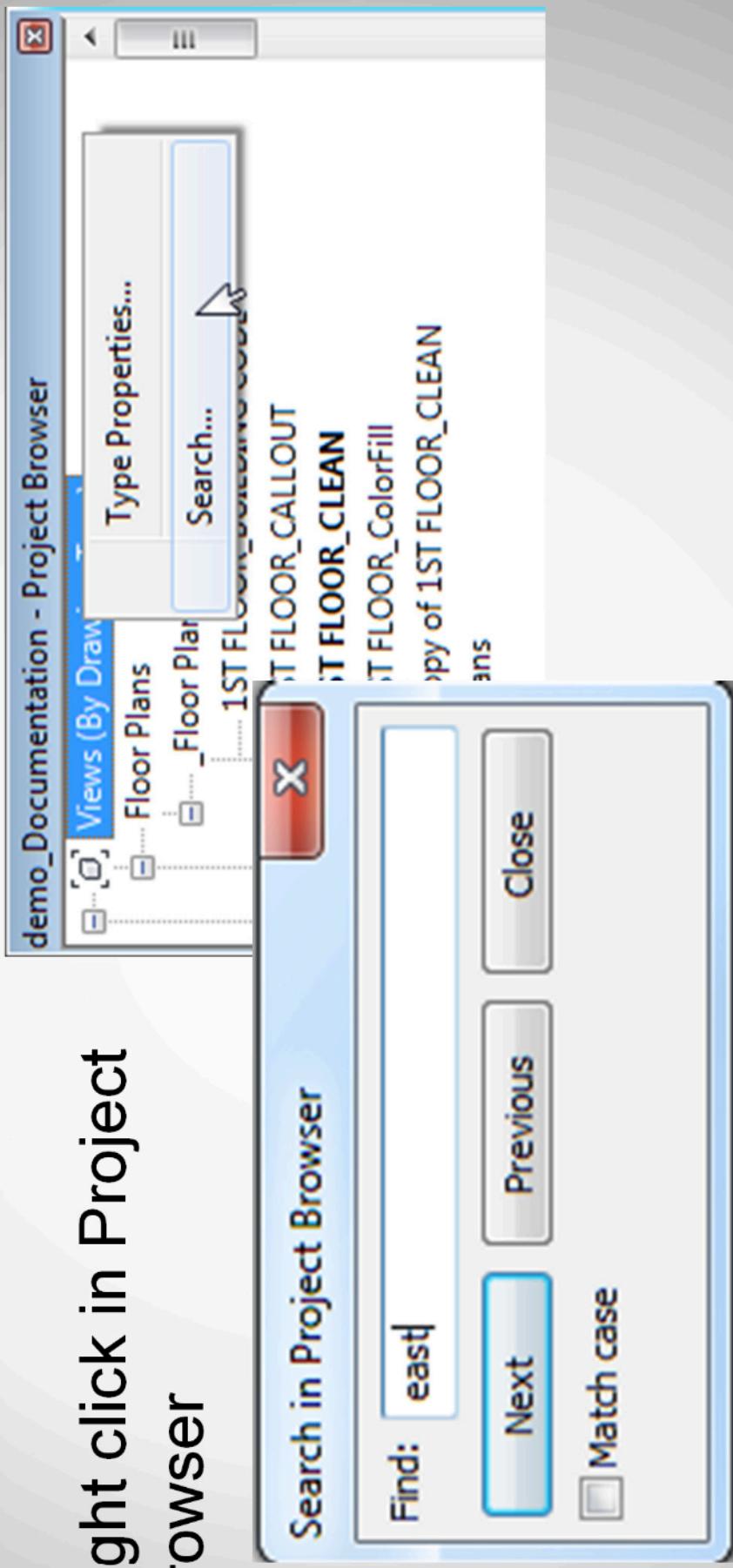
Additional

- Building Element Enhancements
 - Energy Analysis
 - Dockable Window
- Framework and Enhancements
 - Double-Click to Edit
- Interoperability Enhancements
- Materials UI Enhancements
- Productivity Enhancements
 - Non-Rectangular
- Crop Regions Parameter Variance for Groups
 - Room Calculation
 - Point
- Schedules
 - Enhancements Selection
- Enhanced API
- Stairs & Railings Enhancements
- Point Cloud Improvements
 - Alternate Dimensions
- Enhanced API
- Selection Enhancements
- Split Elevations
- Temporary View Templates
- View Navigation Performance

Revit 2013

Searchable Project Browser

- Right click in Project Browser



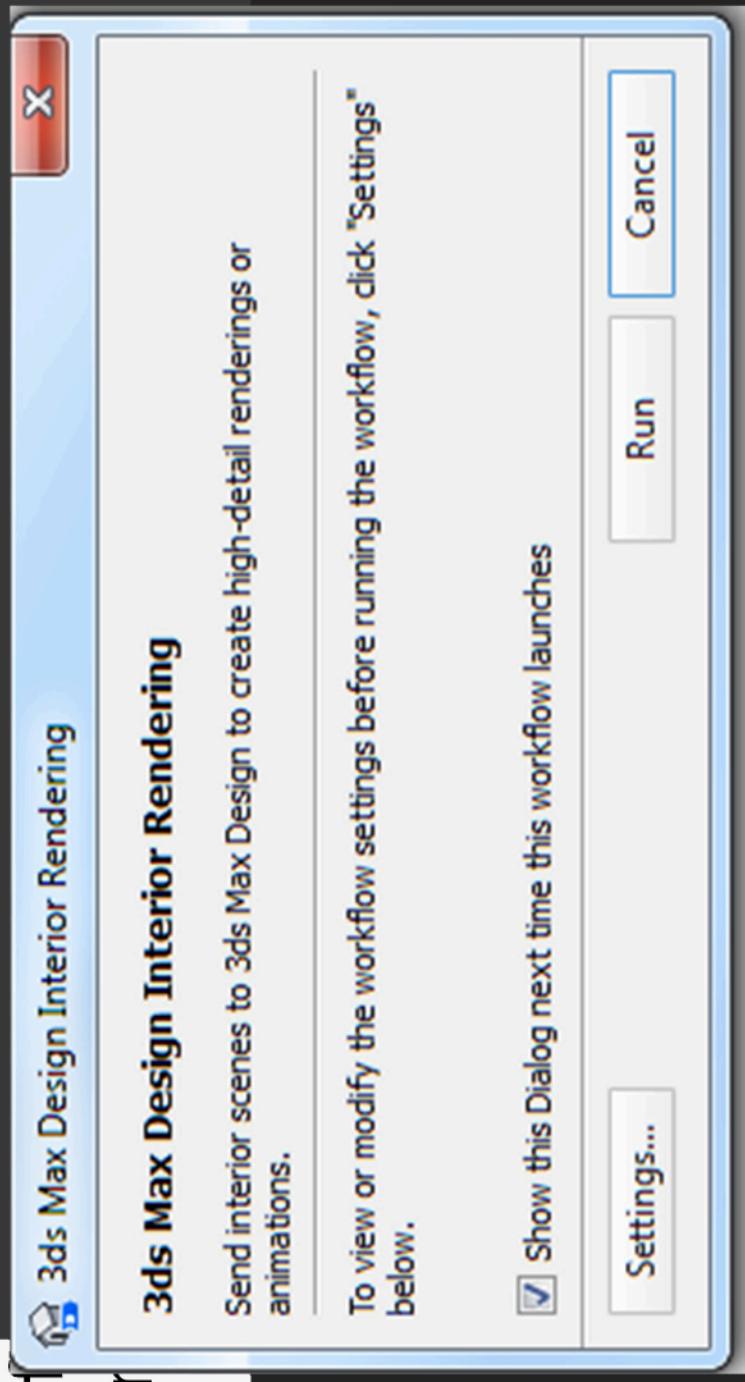
View Templates

- Assign by a view template properties
- Template to view
- Future changes to template affects views it is assigned to



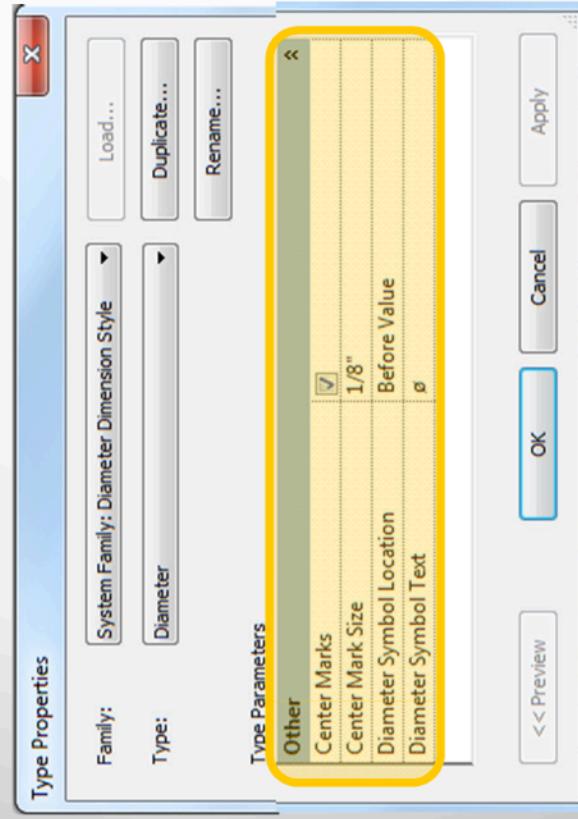
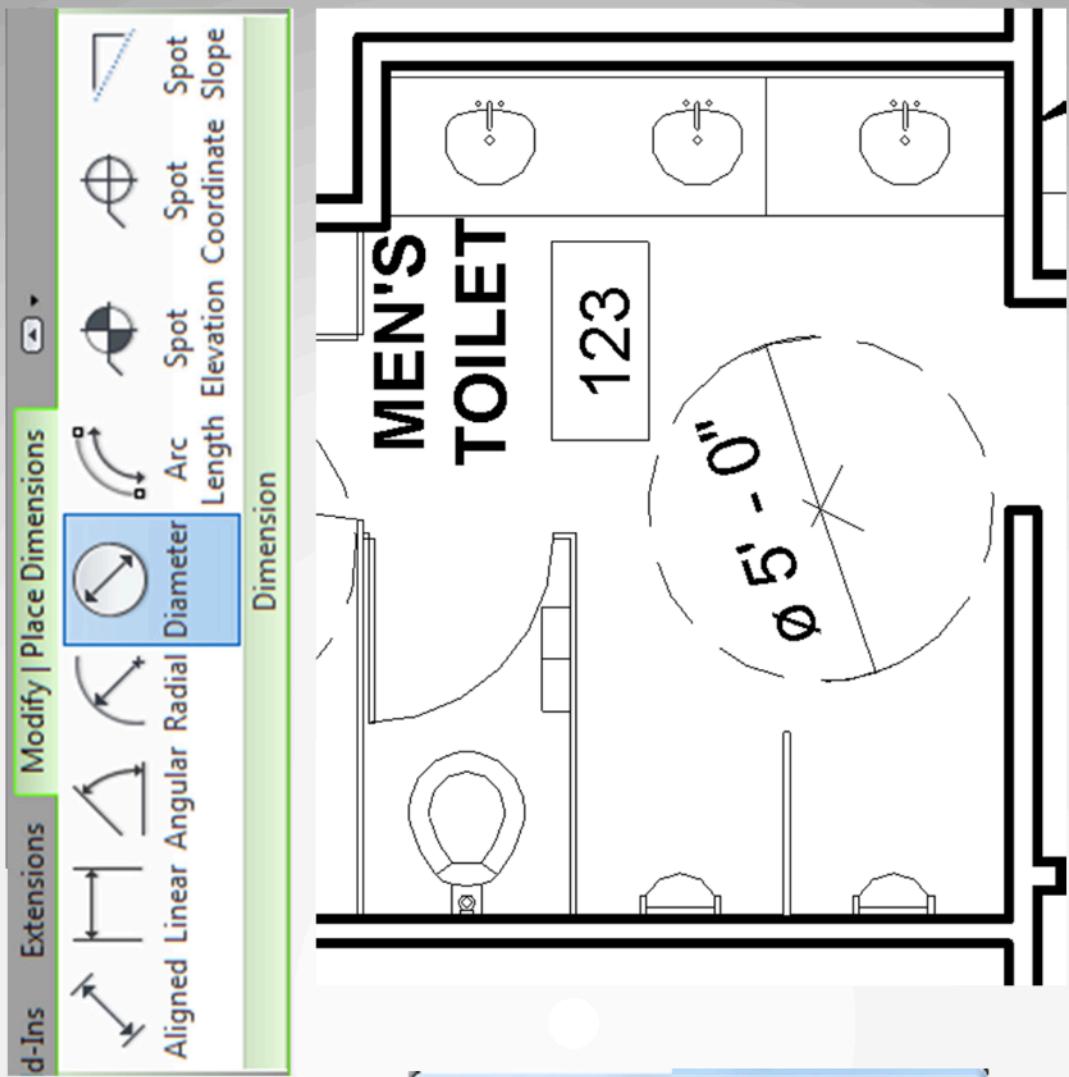
Suite Workflow

- Simplified Workflow
- 3ds Max Design
- Showcase



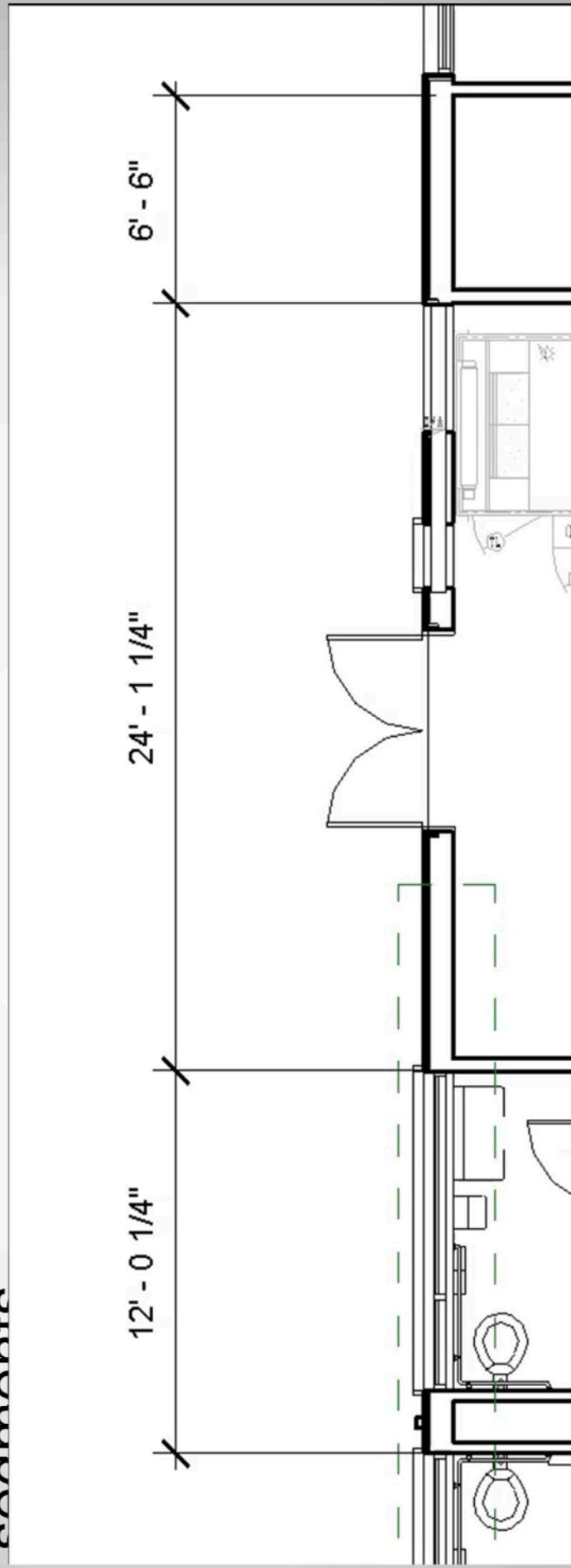
Dimensions

▪ Diameter Dims



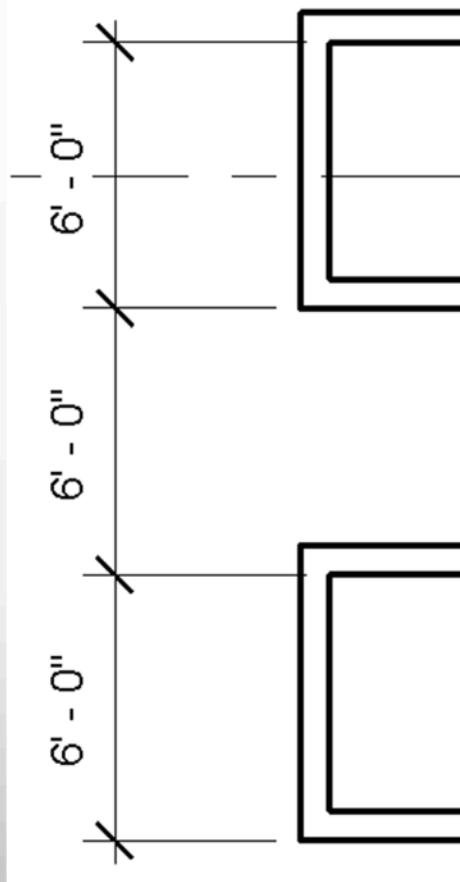
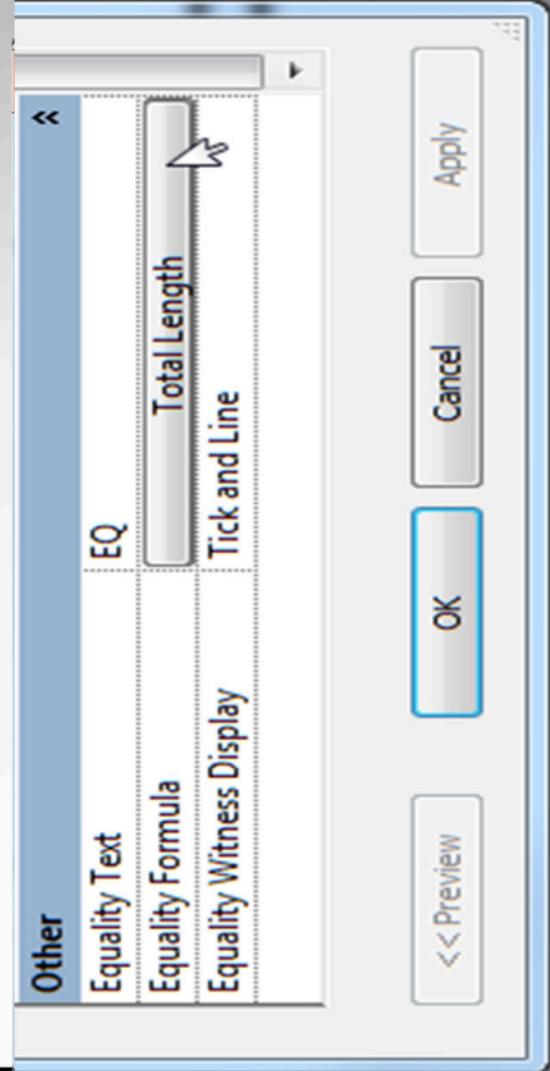
Dimensions

- Delete Dim
commands



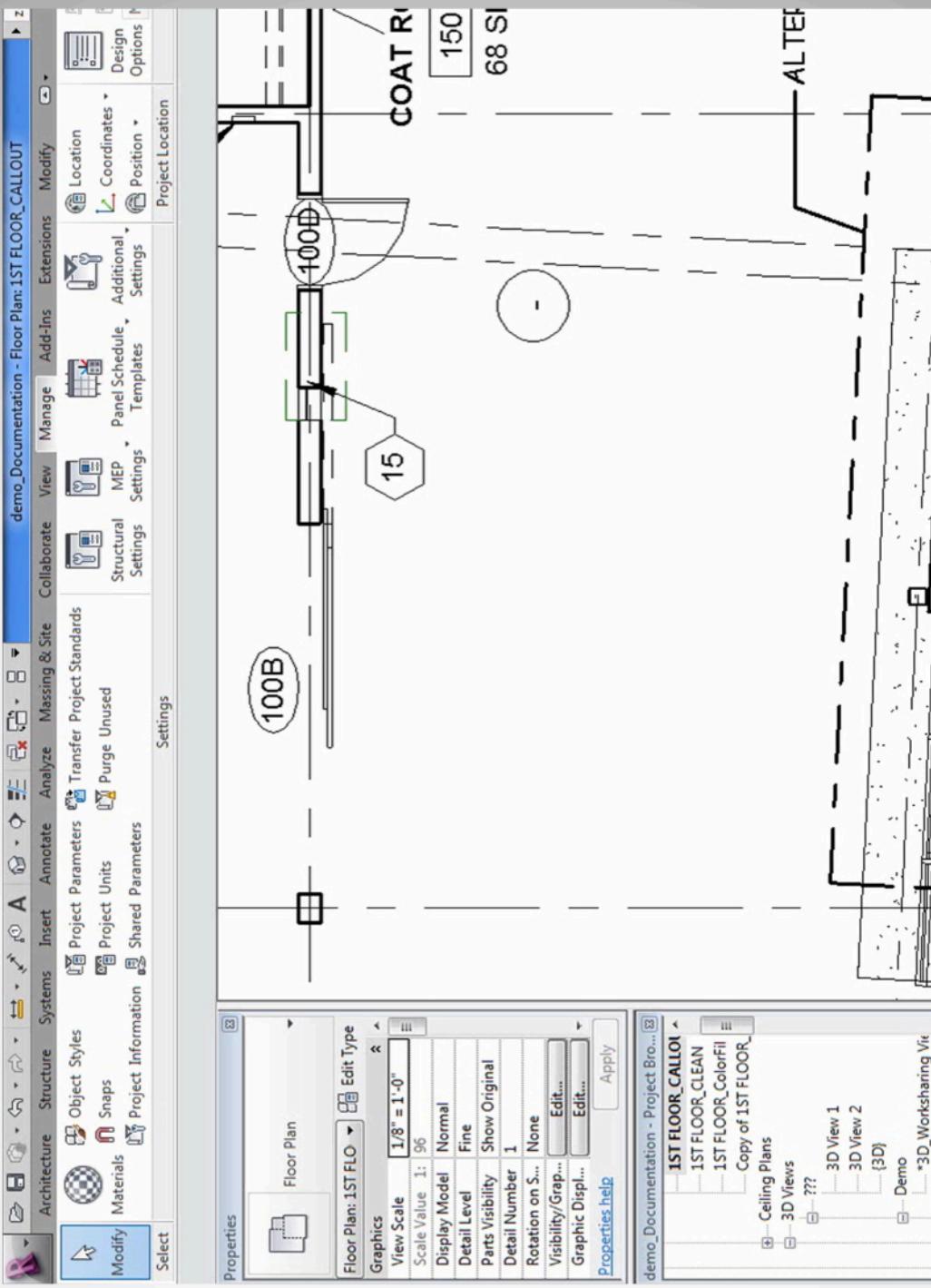
Dimensions

- Dim Display
 - segment values, equality text, or the equality formula string



Arrowhead

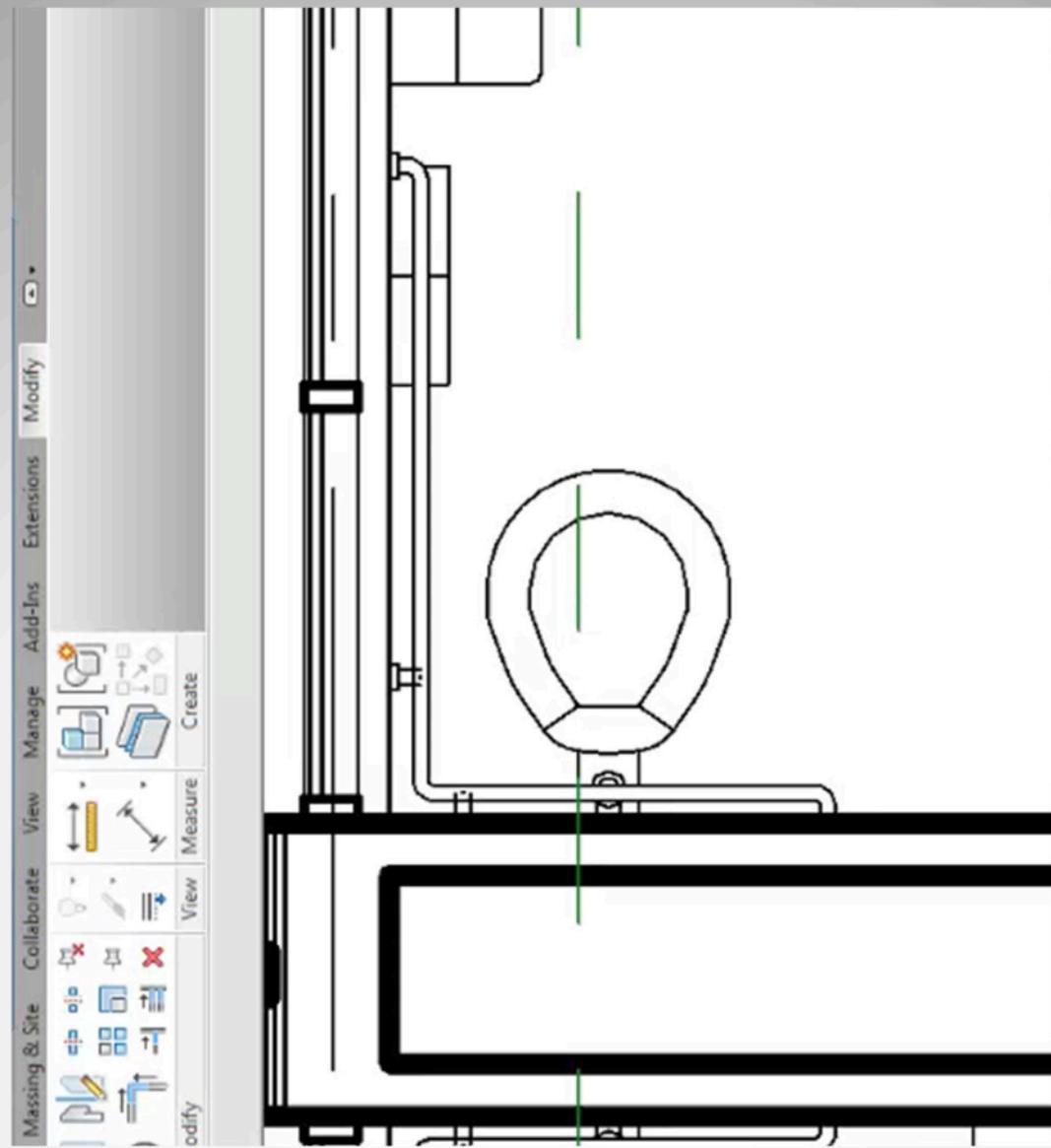
■ Loop



*

Families

- Double click editing



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Filters List

Visibility/Graphic Overrides for Floor Plan: 1ST FLOOR_CALLOUT

Show model categories in this view

Filter list: **Architecture** ▾

If a category is unchecked, it will not be visible.

Visibility	Projection/Surface			Cut	Halftone	Detail Level
	Lines	Patterns	Transparency			
<input checked="" type="checkbox"/> Areas				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Casework				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Ceilings				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Columns				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Curtain Panels				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Curtain Systems				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Curtain Wall Mullions				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Detail Items				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Doors				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Electrical Equipment				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Electrical Fixtures				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Entourage				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Floors				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Furniture				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Furniture Systems				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Generic Models				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Lighting Fixtures				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Objects				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Other Categories				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Shared Content				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Structural Components				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Structure				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Mechanical				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Electrical				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Piping				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Ceilings				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Columns				<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Show model categories in this view

Filter list: **Architecture** ▾

Override Host Layers

Cut Line Styles

All None Invert Expand All

Object Styles...

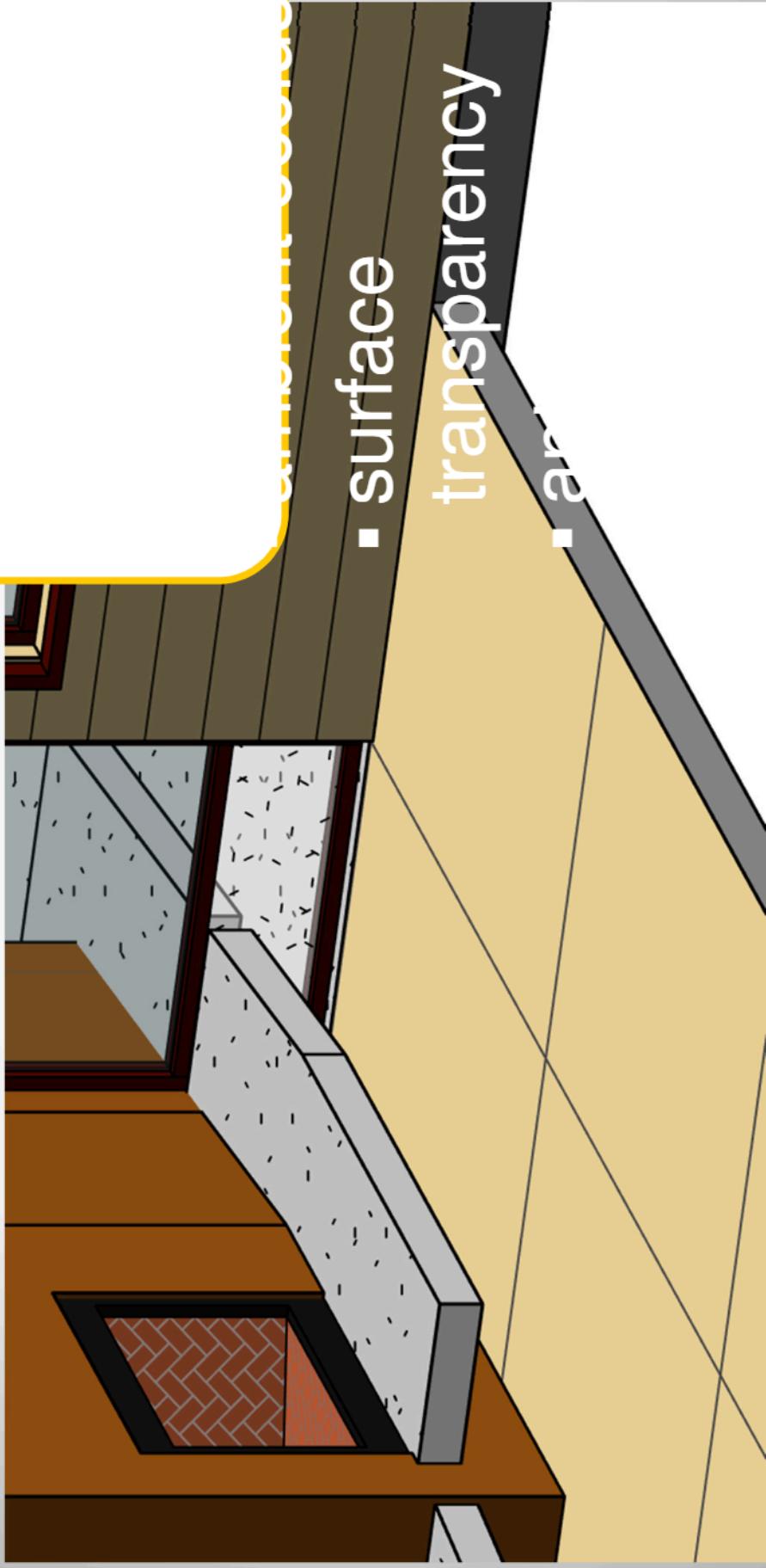
OK Cancel Apply Help

Surface Transparency Slider

- Replaced Ghost Surfaces



Hardware Acceleration



Parts

- Create
- Divide
- Merge parts
- Part project excluded
- Divider offset for part divisions



Create

Parts Visibility

Show Parts

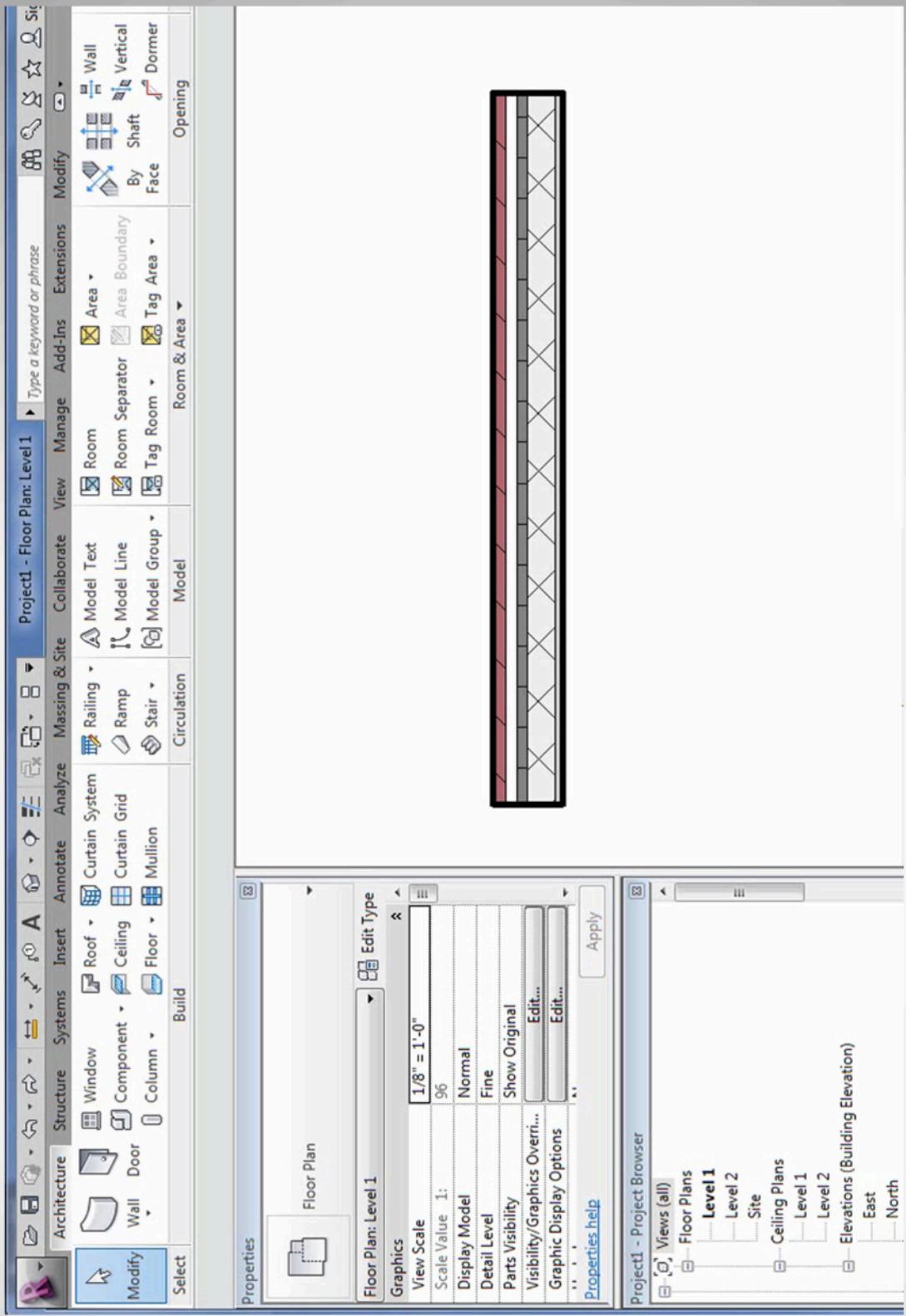
Show Parts

Show Original

Show Both



Parts

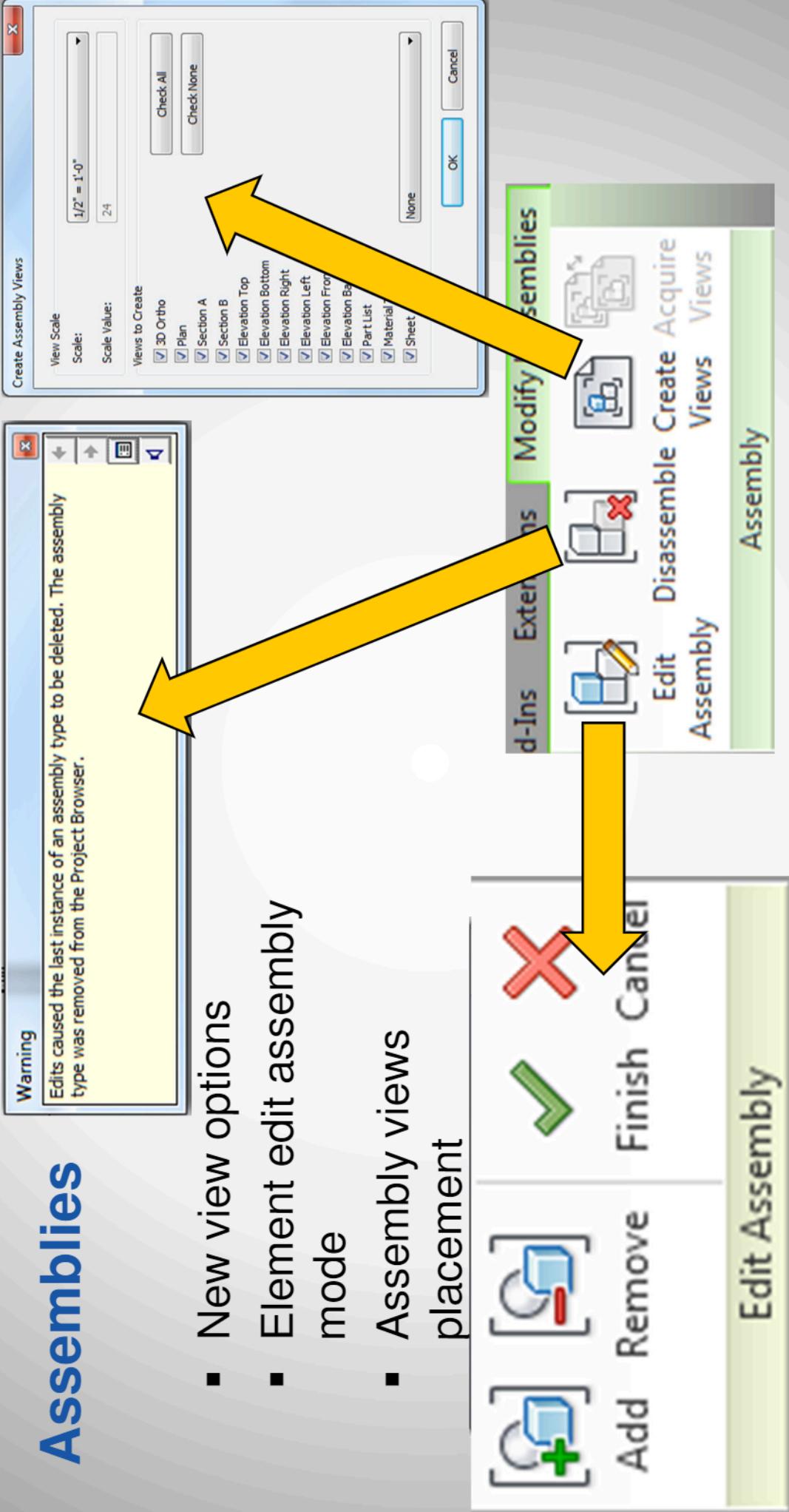


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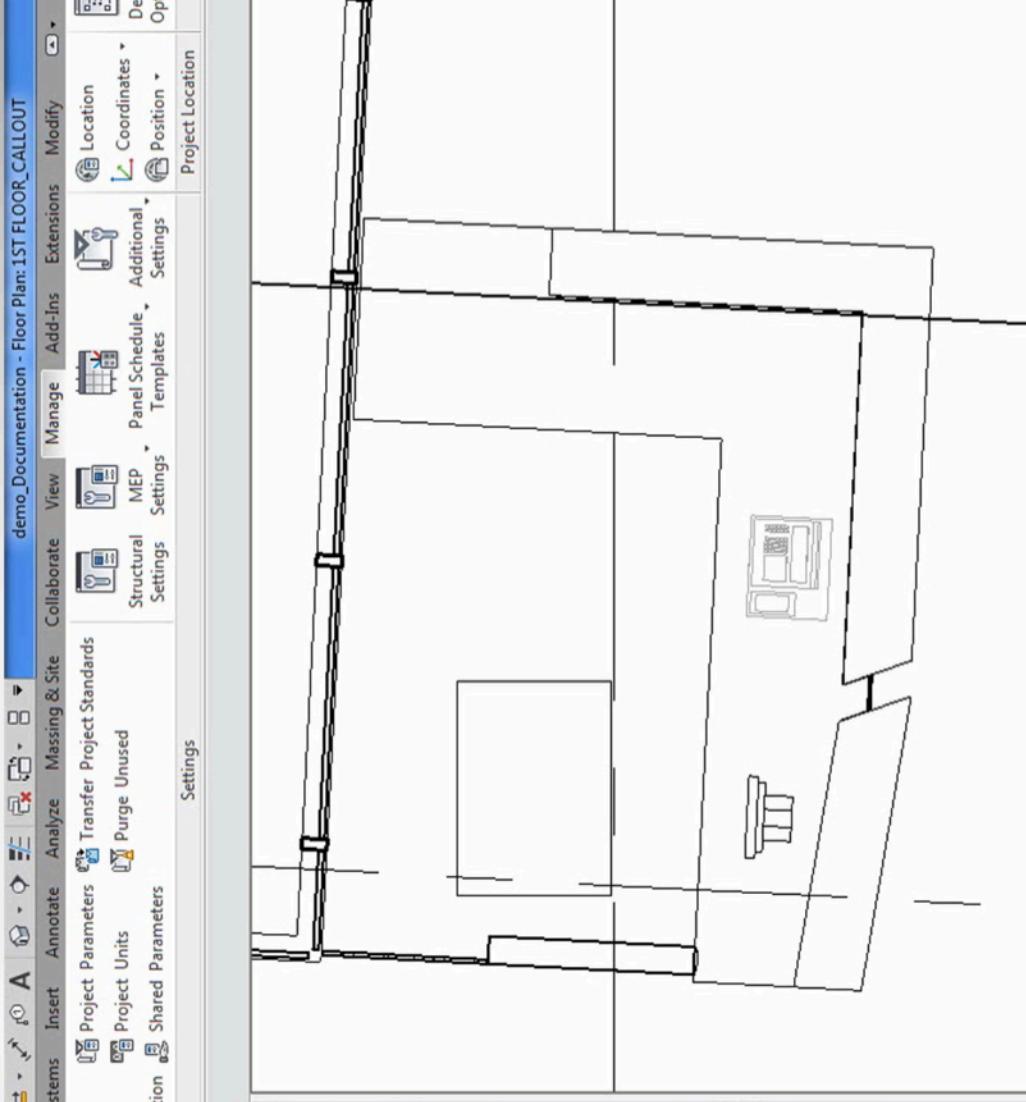
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Assemblies

- New view options
- Element edit assembly mode
- Assembly views placement



Selection Sets



- Previous only
in Revit



Visual Style

- Ray Trace
- Interact with Camera in real time

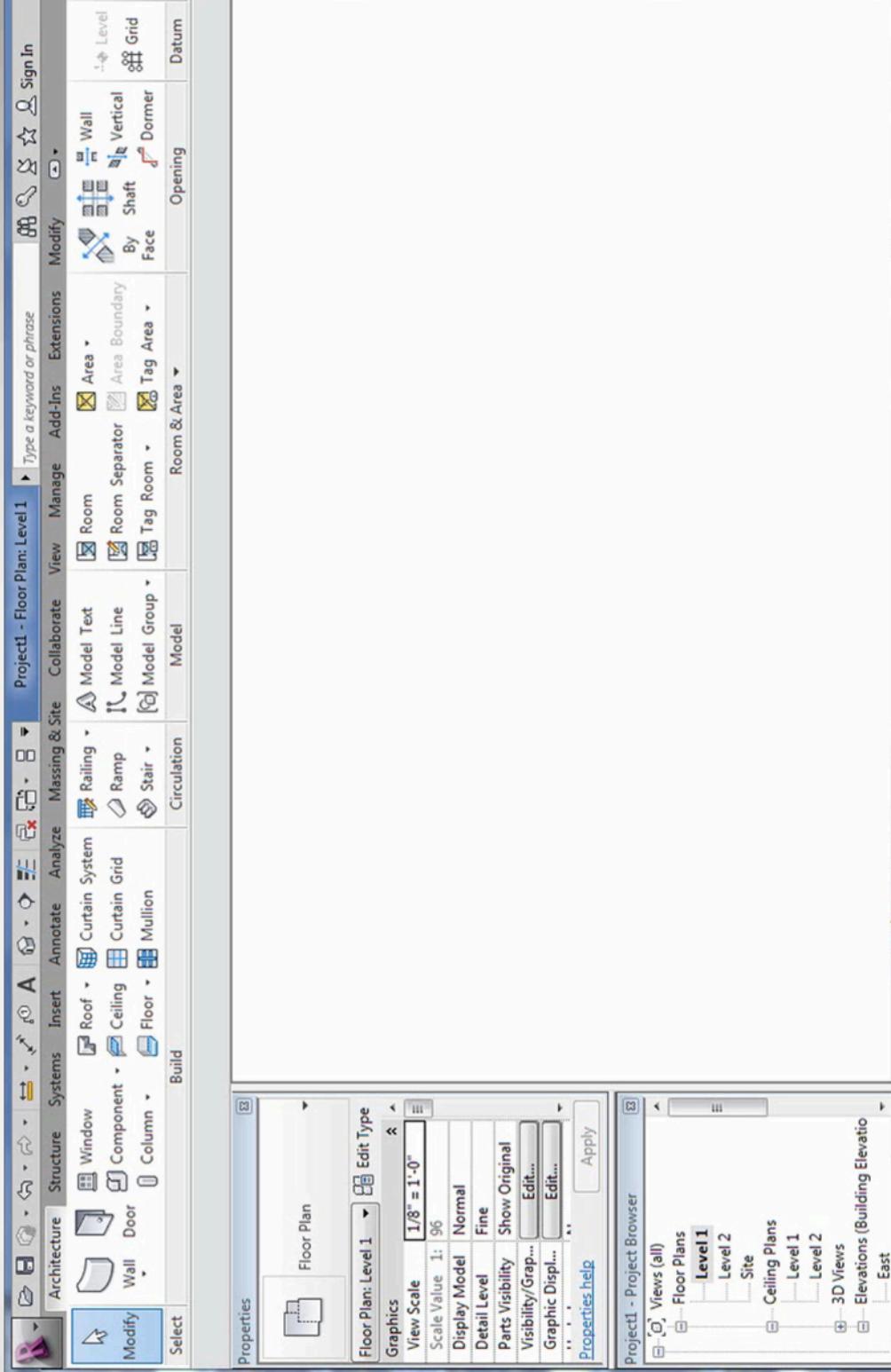


Interactive Ray Trace Mode



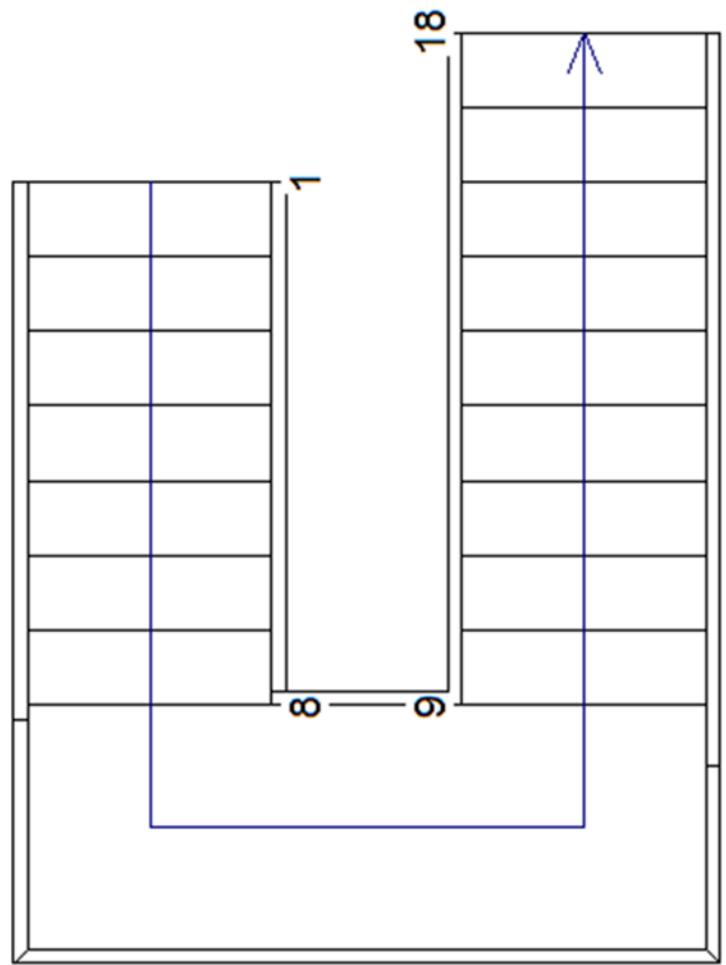
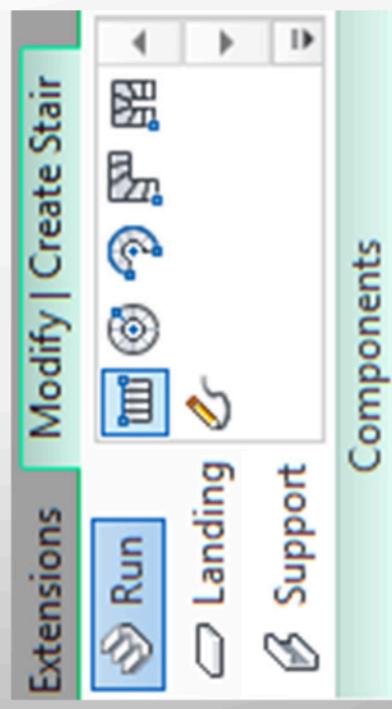
Segmented

■ Multi-segment



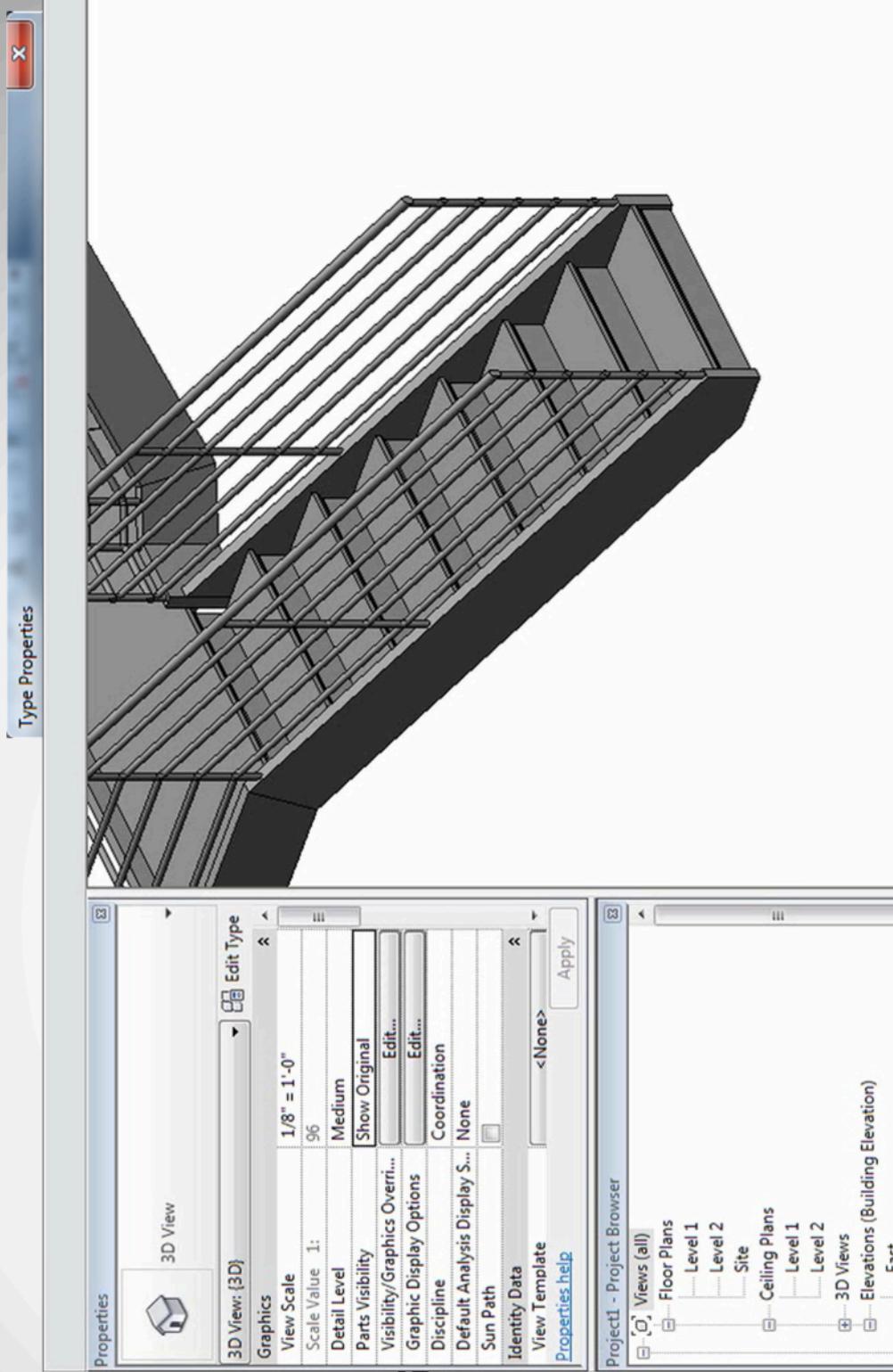
Stairs

- Component based



Railings

- Handrail transitions
- Extensions

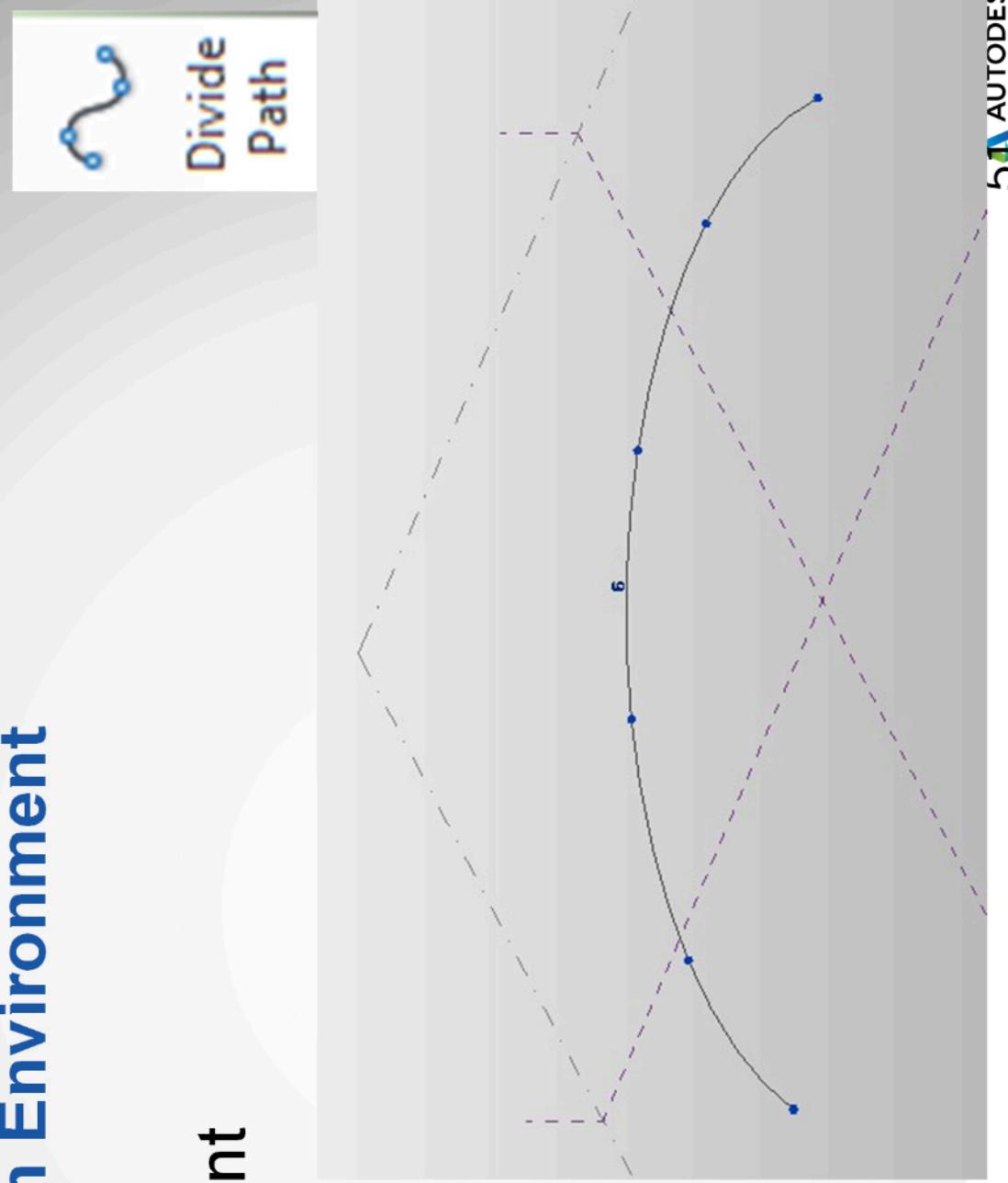


Conceptual Design Environment

- Division placement

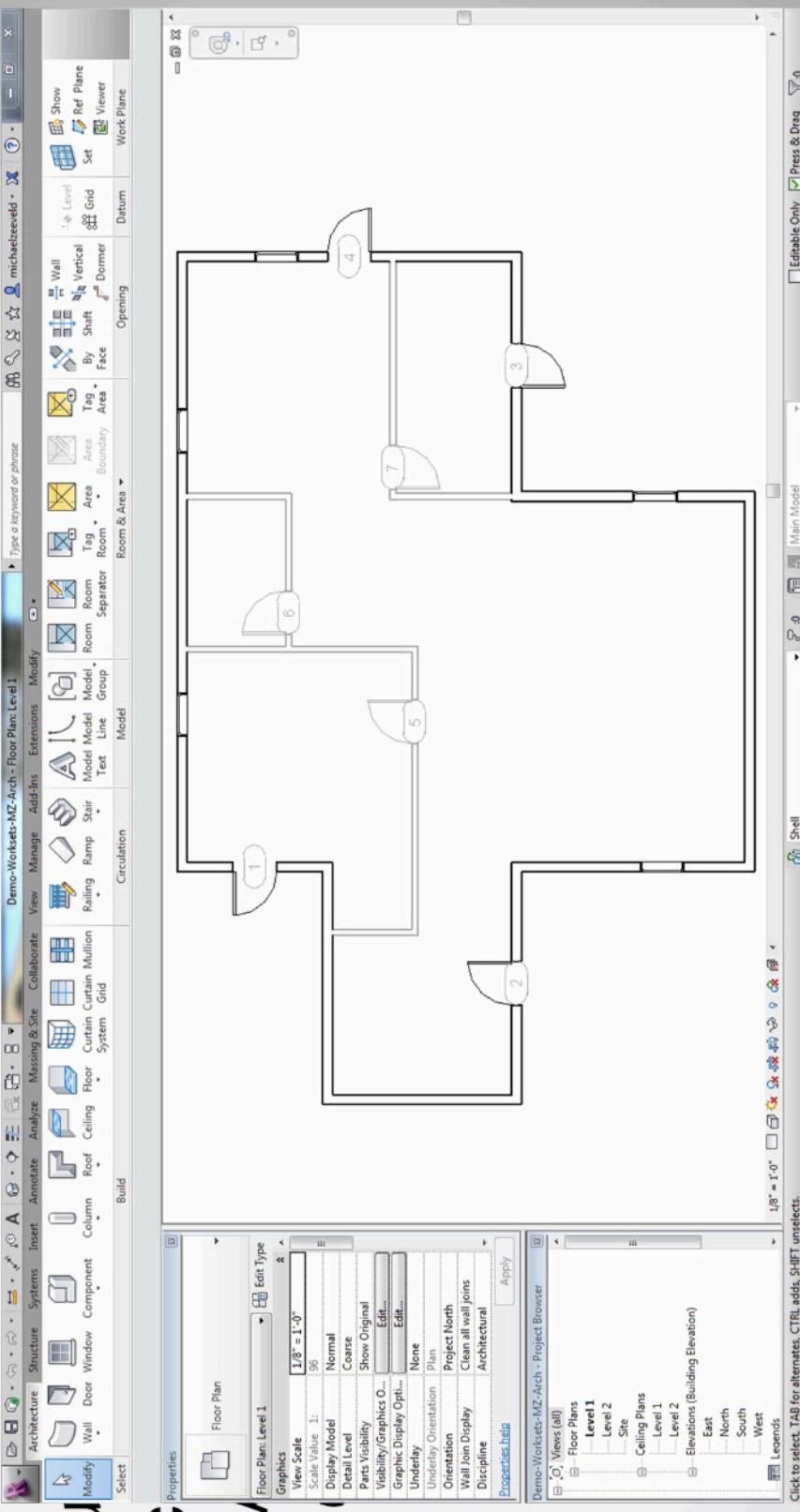
- Node edges

Properties	
Divided Path (1)	<input type="button" value="Edit Type"/>
Nodes	<input type="button" value="Edit"/>
Layout	Fixed Number
Number	6
Distance	61' 8 25/32"
Measurement Type	Chord Length
Total Number of Nod...	6
Show Node Numbers	<input checked="" type="checkbox"/>
Flip Direction	<input type="checkbox"/>
Beginning Indent	0' 0"
End Indent	0' 0"
Identity Data	
Comments	
Mark	
Length	312' 1 155/256"



Worksharing Enhancements

- Edit requests
 - Dynamic
 - Interactivity
 - Notifications



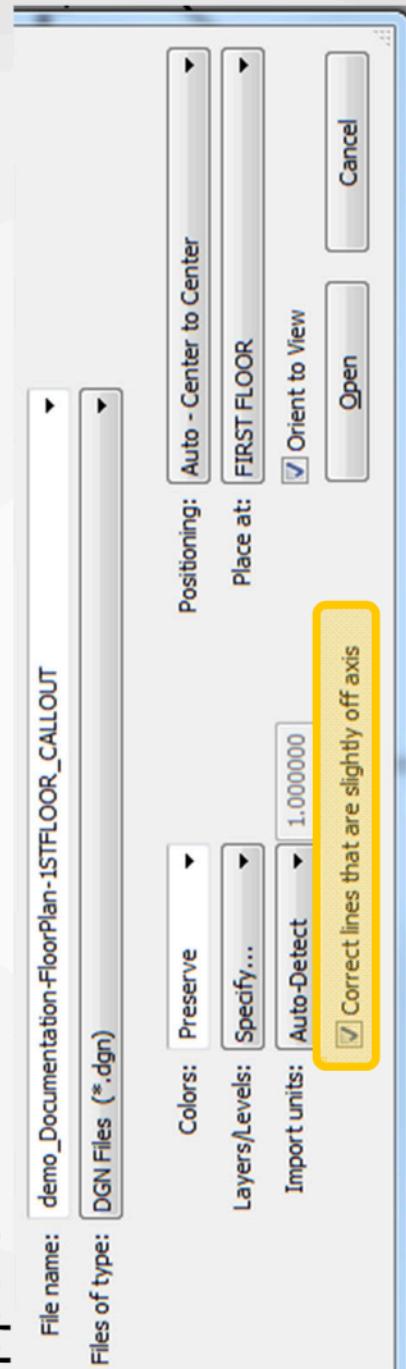
013

Import

- DGN
- V8 support



Import
CAD



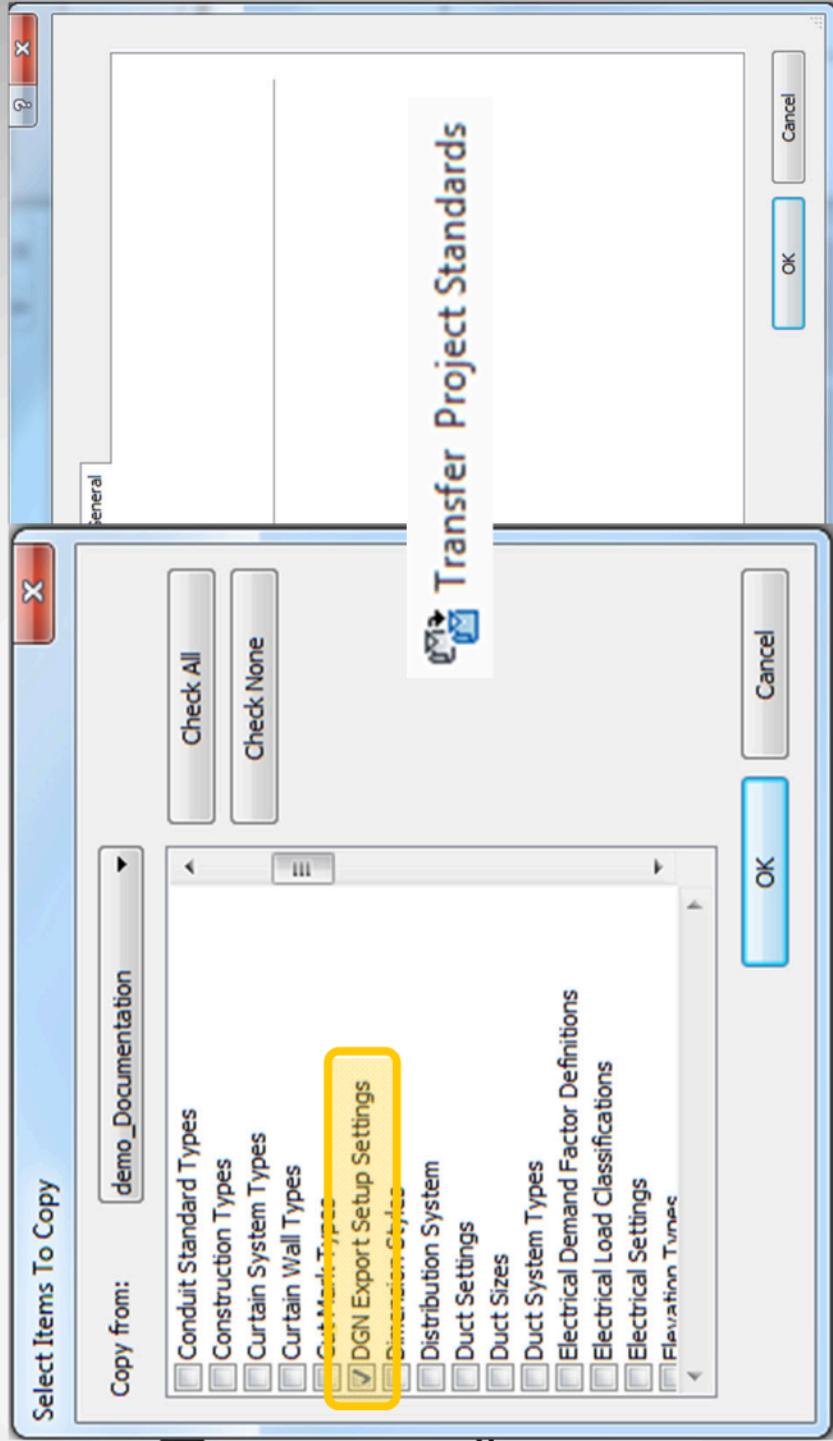
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Export



- DGN
- Additional Model Functionality
- V8 Support
- Save Setups
- Project Transfer



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IFC: Import / Export

- Reduced surfaces
- Better Performance
- More elements supported
- Reduced file size

Supported Elements:

- Assemblies
- Parts
- Curtain walls on massing elements

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
- Administrators tools
- Reduced locks
- Vault

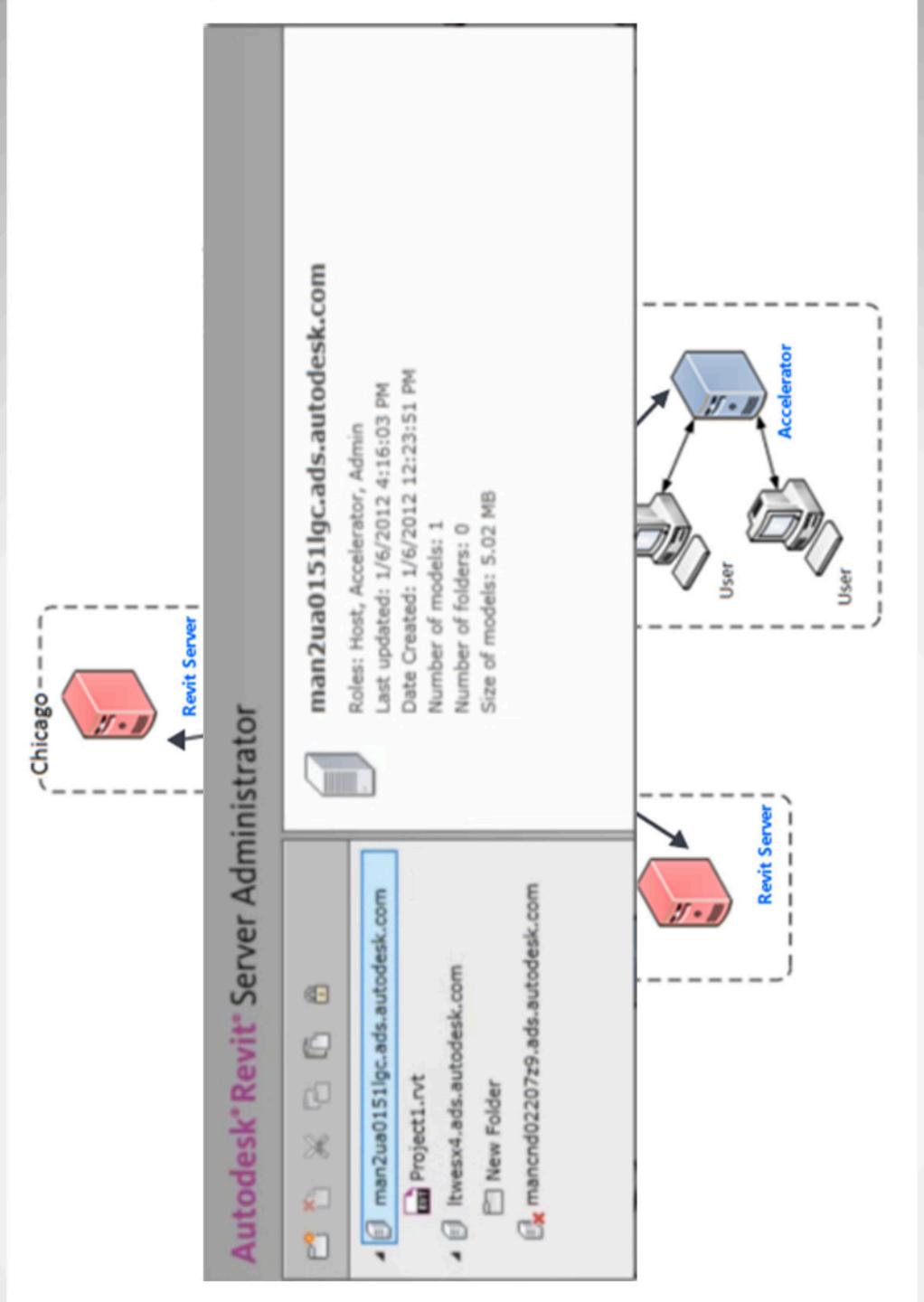
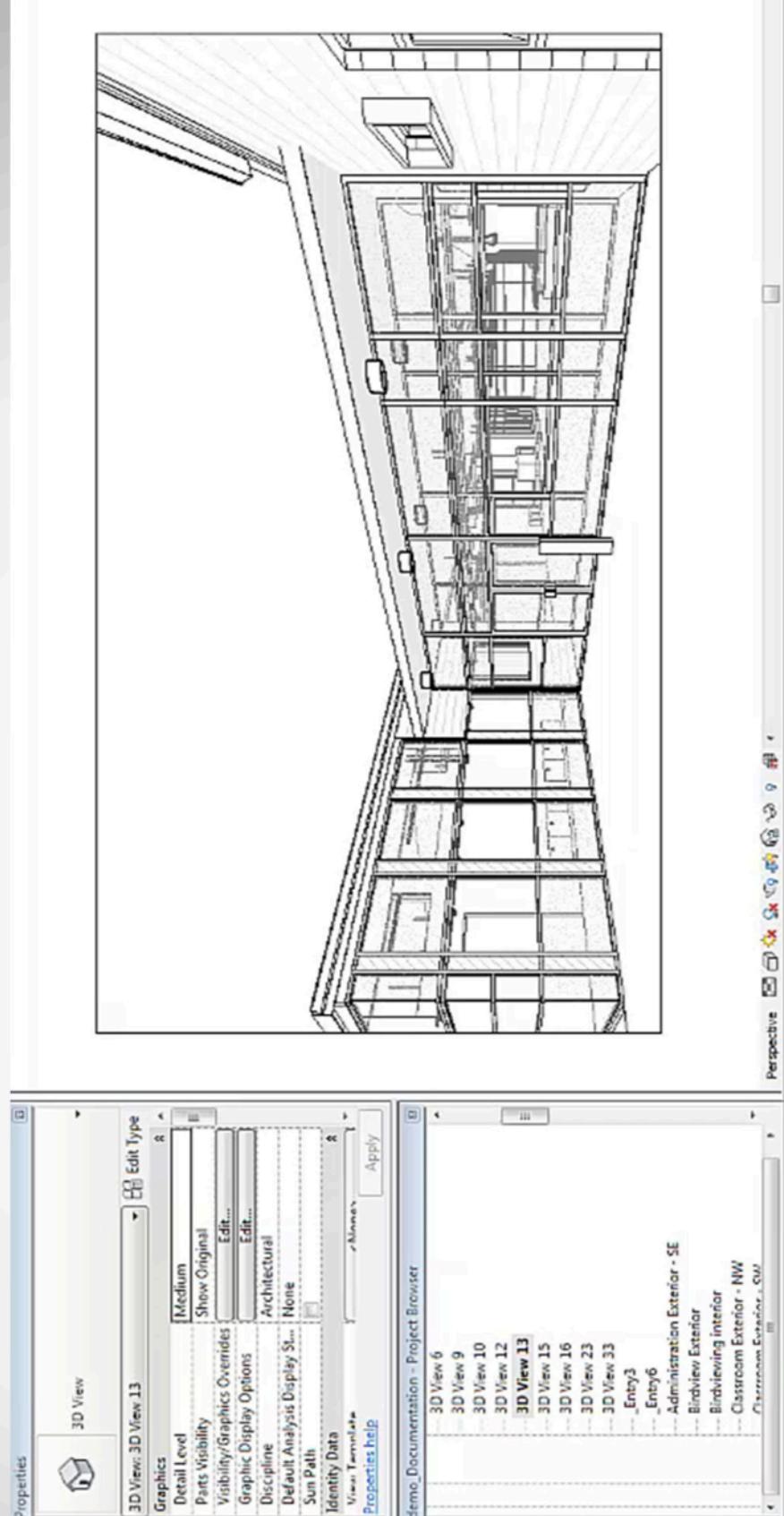
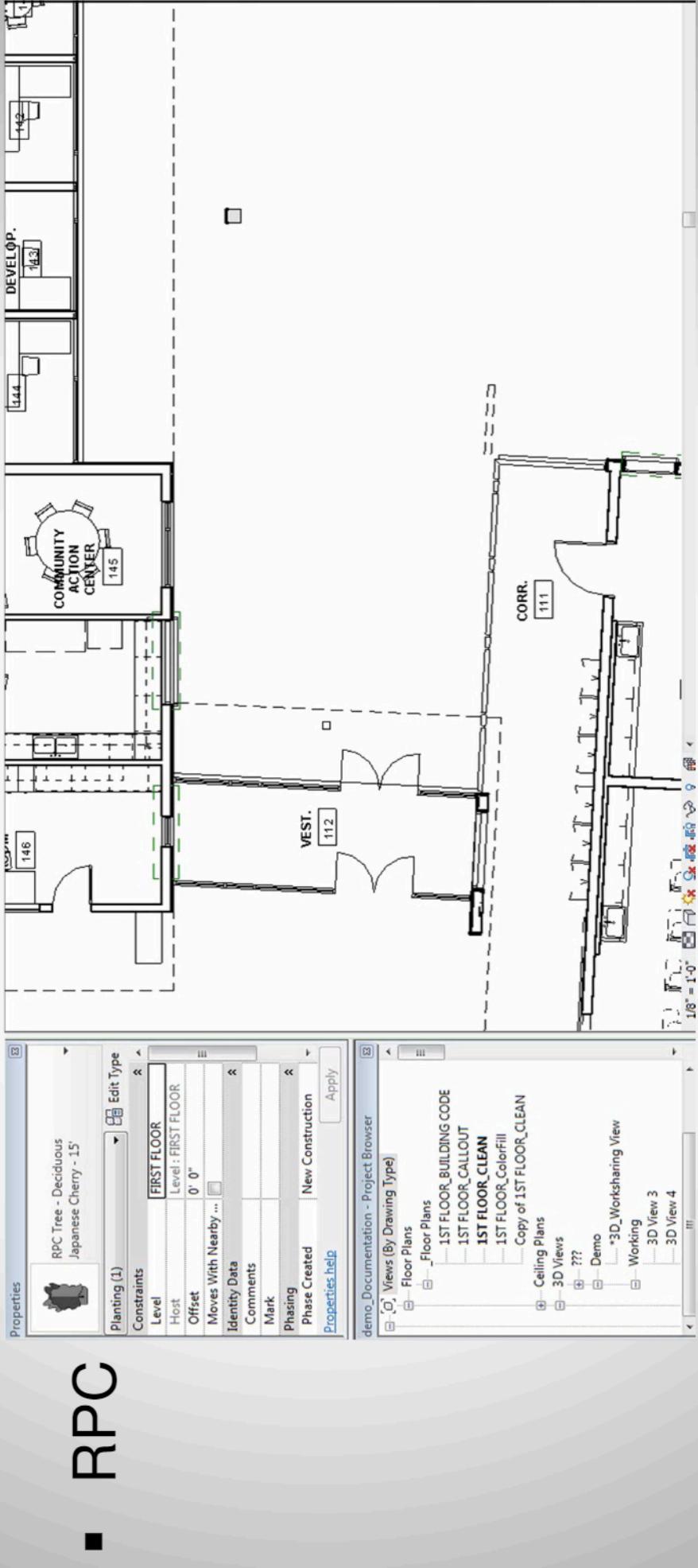


Image background

■ Sky



Realistic Foliage Display



■ RPC

Additional Information

Autodesk® Subscription

■ Extensions



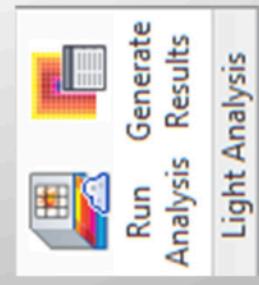
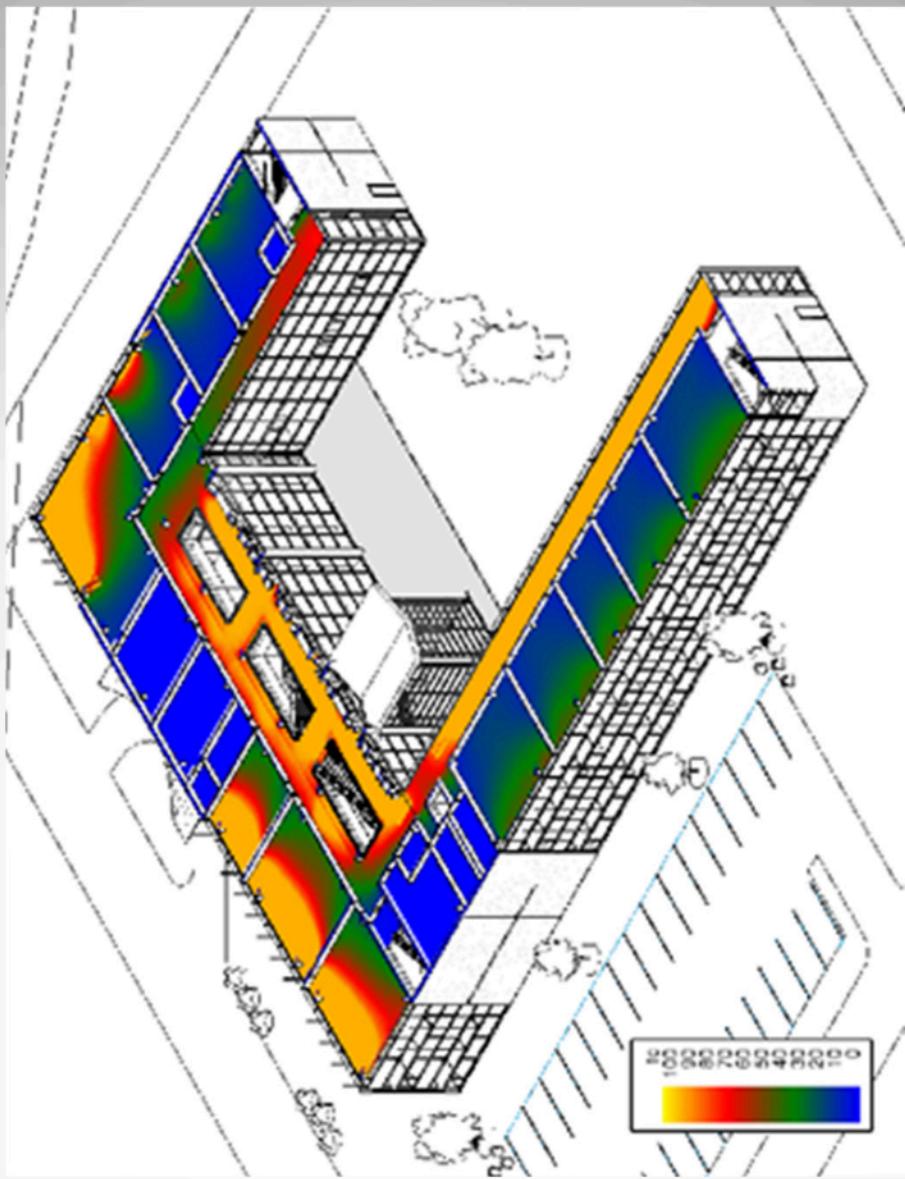
Autodesk® Subscription

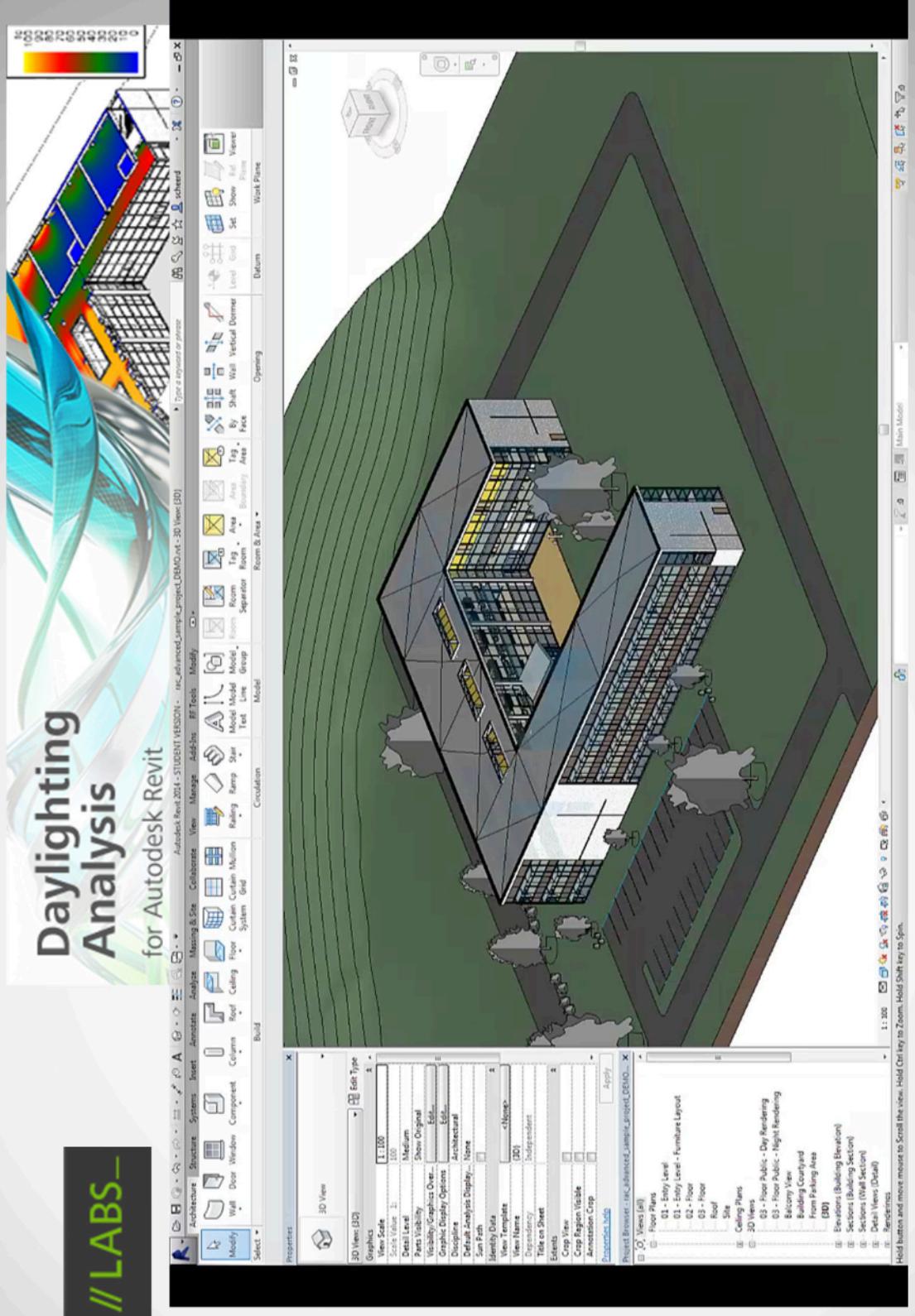


- Extensions/Add-Ins
 - Worksharing Monitor
 - Globe Link
 - Roombook Areabook
 - eTransmit
 - Autodesk Revit Server
 - Autodesk Revit DB Link
 - Autodesk Revit Model Review
 - Batch Print for Autodesk Revit

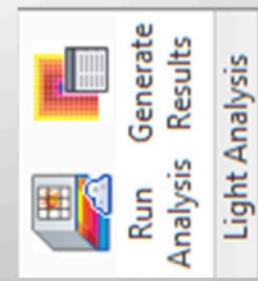
In Autodesk Labs

- Daylighting Analysis





From Labs blog



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Questions?

Summary

- Learned about the exciting new features in Autodesk Revit Architecture 2014 software. Got introduced to new concepts of Building Information Modeling (BIM) and efficient, easy-to-use tools for parametric design and documentation.

Key learning objectives

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

- Describe the new features, concepts, and benefits of Building Information Modeling
- Explain the fundamental concepts and features of Autodesk Revit Architecture
- 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



Thank you!

