SHOP DRAWINGS - Main Features

Modified on: Mon, 19 Aug, 2019 at 8:32 PM

Finish your modeling with the built-in shop drawing generator and deliver your floor framing estimation in the same hour. Compile your complete shop drawings with dimensioning, part lists, and material take-off automatically.



Floor+ will collect all elements from one floor panel and make an assembly with predefined views, add dimensions, add tags, make sheets, and put the views into the sheets.



The basic shop drawing workflow consists of the following steps:

- 1. Floor+ \rightarrow define **Drawing Configuration**
- 2. Floor+ \rightarrow make shop drawings for one floor using **Create Assembly**
- 3. Floor+ \rightarrow number the framing members
- 4. Add shop drawing views into the sheet for one floor and save it as a template for future floors

- 5. Floor+ \rightarrow make shop drawings for other floor segments
- 6. Floor+ \rightarrow update shop drawings if any changes have been made to the model

Drawing Configuration



7/9/2021

R D	rawing Cor	ıfig							_		×
Drawing Config Example Configuration											
Asse	Assembly Views Detail View Schedules Sheets										
	ate Assemb	ly Views —	Edit Dimen	sioning Rules							
	Create View	Create Detail View	View Number	View	Rotate	View Nan	ne	Framing Layer	View Template	E :	št S h
	~		1 ~	3D Ortho 🗸	None 🗸	3D Ortho		All Layers 🗸 🗸	3D Ortho Assembly 💙		
	✓		1 ~	Elevation Top 🛛 🗸	None Y	Frame Top)	Frame 🗸 🗸	Structural Section V		
	✓		1 ×	Elevation Top 🛛 🗸	None Y	Frame&SI	neathing Top	Sheathing 🗸 🗸	Framing - Sheathir 🔻		
	~		1 ×	Elevation Bottom 🛛 🗸	None Y	Batten Bo	ttom	Batten 🗸	Structural Section V		
	~		1 ×	Elevation Front 🛛 🗸	None Y	Assembly	Front	All Layers 🗸 🗸	Framing - Sheathir 🔻		
	✓ □ 1 × Elevation Bottom × None				None Y	Batten&S	heathing Bottom	Sheathing II 🛛 👻	Framing - Sheathir 🔻		
			1 ~	Elevation Front 🛛 🗸	None 🗸	Frame Fro	nt	Frame v	Structural Section 🛛 👻		
Cr	Create Detail Views only for Primary Assembly										
						Insert Grav	vity Point (GP)	Lock 3D Views			
Tag with Leaders Sync 3D View Orientation from Template Rotate Views only when Creating Assembly (none)											
Cun	- Current Configuration Location										
C:V	C:\Users\Renata\AppData\Roaming\Tools 4 Revit\Floor+2020 Configurations\Shop Drawing Configurations\Shop Drawing Configurations\Metric										
	Save&Close Cancel										

Drawing Configuration – predefine the settings for creating shop drawings. It is very versatile with thousands of different possibilities.

Configurations can be saved, duplicated, renamed, and deleted. You can check the location of configurations under **Current Configuration Location**:

R Dr	awing Cor	nfig														-			\times
Drawing Config Example Configuration · Save Duplicate Rename Delete																			
Asser	mbly Views	5 Detail View	v Sch	edule	es Sheets														
		1 VICUS	Edit Dir	mens	ioning Rules														
	Create View	Create Detail View	View Numł	ber	View		Rotate		View Nam	ne		Framing Laye	er	View Te	emplate		Ħ	St r	S h
	~		1	\sim	3D Ortho	~	None	\vee	3D Ortho			All Layers	Ŷ	3D O	rtho Assembly	~			
	-		1	Ŷ	Elevation Top	~	None	Ŷ	Frame Top)		Frame	Ŷ	Struc	tural Section	~			
	-		1	Ŷ	Elevation Top	~	None	Ŷ	Frame&SI	neathing Top		Sheathing	Ŷ	Fram	ing - Sheathir	~			
	-		1	Ŷ	Elevation Bottom	~	None	Ŷ	Batten Bottom Batten		Ŷ	Struc	tural Section	~					
	~		1	×	Elevation Front	~	None	×	Assembly	Front		All Layers	Ŷ	Fram	ing - Sheathir	~			
	-		1	×	Elevation Bottom	~	None	×	Batten&SI	neathing Botto	om	Sheathing II	Ŷ	Fram	ing - Sheathir	~			
			1	Ŷ	Elevation Front	~	None	Ŷ	Frame Fro	nt		Frame	Ŷ	Struc	tural Section	~			
	<																		>
Cre	eate Detail	Views only fo	or Prima	ary A	ssembly 🗌														
[Insert Grav	ity Point (GP)		Lock 3D View	/S]			
Tag with Leaders Sync 3D View Orientation from Template																			
Rotate Views only when Creating Assembly (none)																			
Curr	Current Configuration Location																		
C:\	C:\Users\Renata\AppData\Roaming\Tools 4 Revit\Floor+2020 Configurations\Shop Drawing Configurations\Shop Drawing Configurations\Metric																		
															Save&Clos	e	(Can	cel

The 4 tabs (**Assembly Views**, **Detail View**, **Schedules** and **Sheets**) are for setting up assembly views, detail views, schedules, and sheets, respectively:

R Drawing Config

1	Drawin	ig Config	Example Co	onfiguration	I	~	Save	Duplicate	Rename	Delete
7	Assem	bly Views	Detail View	/ Schedule	s Sheets					
ſ	Create	e Assemb	ly Views ——	Edit Dimens	ioning Rules					
		Create View	Create Detail View	View Number	View	Rotate	View Nam	ie	Framing Lay	/er
		~		1 *	3D Ortho 🗸	None 🛛 🗸	3D Ortho		All Layers	×
		✓		1 ×	Elevation Top 🛛 🗸	None Y	Frame Top)	Frame	~
		✓		1 ×	Elevation Top 🛛 👻	None Y	Frame&Sh	eathing Top	Sheathing	Ý

<u>Read more about Assembly Views >> (https://agacad.freshdesk.com/support/solutions/articles/44001780325-shop-</u> <u>drawings-drawing-configuration-assembly-views)</u>

<u>Read more about Schedules >> (https://agacad.freshdesk.com/support/solutions/articles/44001780331-shop-drawings-drawing-configuration-schedules)</u>

<u>Read more about Sheets>> (https://agacad.freshdesk.com/support/solutions/articles/44001780332-shop-drawings-drawing-configuration-sheets)</u>

Create Assembly



Create Assembly – makes shop drawings for selected floors. Select any frame from the floor, and after clicking **Create Assembly**, the software will create shop drawings according to the predefined configuration.

Mandatory condition: selected floor needs to have a Mark value assigned:



This value will be used as the assembly name. You can find shop drawings in **Project Browser** under Assemblies.

An assembly combines all parts into a single entity, which is scheduled and isolated to create shop drawing views with tags and dimensions.



Update Frame Assembly



Update Frame Assembly – updates the selected assembly if any changes were made to the framing or to the **Drawing Configuration**.

Example 1: dimension type was changed in the configuration. Result after updating:







Disassemble Assembly



Disassemble Assembly – removes the assembly relationship between elements in the selected assembly and all associated views.

Recommended workflow: Instead of **Revit** \rightarrow **Disassemble**, we recommend using **Floor+** \rightarrow **Create Assembly** \rightarrow **Disassemble Assembly** as it doesn't show unnecessary pop-ups and deletes the gravity point.

Calculate Assembly Dimensions



Calculate Assembly Dimensions – calculates assembly dimensions (area, volume, width, depth, length, height) by predefined rules and writes the results in assembly instance parameters (Assembly Area, Assembly Volume, Assembly Width, Assembly Depth, Assembly Length, Assembly Height) for later use in schedules.

Select area calculation method:



Result:

7/9/2021

SHOP DRAWINGS – Main Features : AGACAD

Properties	×
Structural Framing F-9	Assembly
Assemblies (1)	✓ Paris Edit Type
Framing Member	Assembly
Framing Member Type	Assembly
Framing	Floor
Framing Member Description	Assembly
FM SortMark	
Framing Layer	Frame
Framing Member Mark	AS
FM HostMemberSortMark	F-9
Framing Member Mass	463.771 kg
Framing Member Volume	0.238 m³
Assembly Area	0.664 m²
Assembly Volume	2.198 m³
Assembly Width	3311.5
Assembly Depth	3311.5
SDC	Example Configur
Assembly Length	2100.0
Assembly Height	316.0
Phasing	\$
Phase Created	New Construction
Phase Demolished	None



Calculate Framing Element Mass



Calculate Framing Element Mass – calculates mass of selected framing elements, and writes result to **Framing Member Mass** parameter, which you can find in **Element Properties** \rightarrow **Identity Data**.

7/9/2021

SHOP DRAWINGS – Main Features : AGACAD



Density parameter must be filled in for the element in **Materials** \rightarrow **Physical** tab:

File	Architecture	Structure	Systems	Insert	Annotate	Analyze	Massing & Site	Collaborate	View	Manag	e Add-li
↓ Modify	Materials			Ja Iditional ettings	© ∠ • @•	De	sign Main Model	-	Manage Links		Phases
Select 👻		Setting	Js		Project Loca	tion	Design Optio	ns	Manage P	roject	Phasing S
Modify	Structural Fra				Mater	rial Brov	vser - Wood - C2	24		?	×
Propertie	M_Wall_F LMBF 45;	Search Project N	laterials: All	•>			Identity Graphic	s Appearanc	e Physica	+ +) ×
Structura Structur	ll Framing (Ot al Material	St	eel, Carbon				 Information Basic Thermal Thermal Ex., peffic 	cient 0.00001	inv °C		
Structura Stick Syn Start Co	l mbol Locatior nnection	St	eel, Chrome	Plated			▼ Mechanical				
End Cor Cut Len	nection gth	St	ructure, Stee	el Bar Joist I	Layer		Beha Young's Mod	lulus 11 000,0	ic) MPa		• •
Structur Enable A	al Usage Analytical Moo	Vi	nyl Compos	ition Tile			Poisson's F Shear Mod	Ratio 0,00 Iulus 5 500,0	MPa		•
Dimensio Build in Visible	ns Place_True	w w	hite				De	nsity 349,76 l	‹g/m³		÷
h_True h2			ood	/			Strength				
Propertie	<u>s help</u>	w	ood - C24								
Project Br	owser - Wood	w	ood - Cherr	у							
j [Detail Views (D W-4-Secor	w	ood - Dime	nsional Lur	nber	~					
	Valkthroughs	🔄 • 🚱	• 📃			~~					
	egends chedules/Qua	₽						ОК	Cano	el	Apply .::

Purge Detail Views if no Assembly



Purge Detail Views if no Assembly - removes detail views if assembly has been disassembled.



Part Assembly Menu



Part Assembly Menu – features for creating assemblies from parts and different part selection options.

Read more >> (https://agacad.freshdesk.com/a/solutions/articles/44001780334-shop-drawings-part-assembly-menu)

Smart Dimensions

Frame Add/Modify Image: Constraint of the state of th	Create Assembly
Floor+	Create Assembly
	Drawing Configuration
	Update Frame Assembly
	Disassemble Assembly
	Calculate Assembly Dimensions
	Calculate Framing Element Mass
	Purge Detail Views if no Assembly
	Part Assembly Menu
	Smart Dimensions

Smart Dimensions – features for setting up dimensions in shop drawings.

Read more >> (https://agacad.freshdesk.com/a/solutions/articles/44001780335-shop-drawings-smart-dimensions-main-

<u>features)</u>