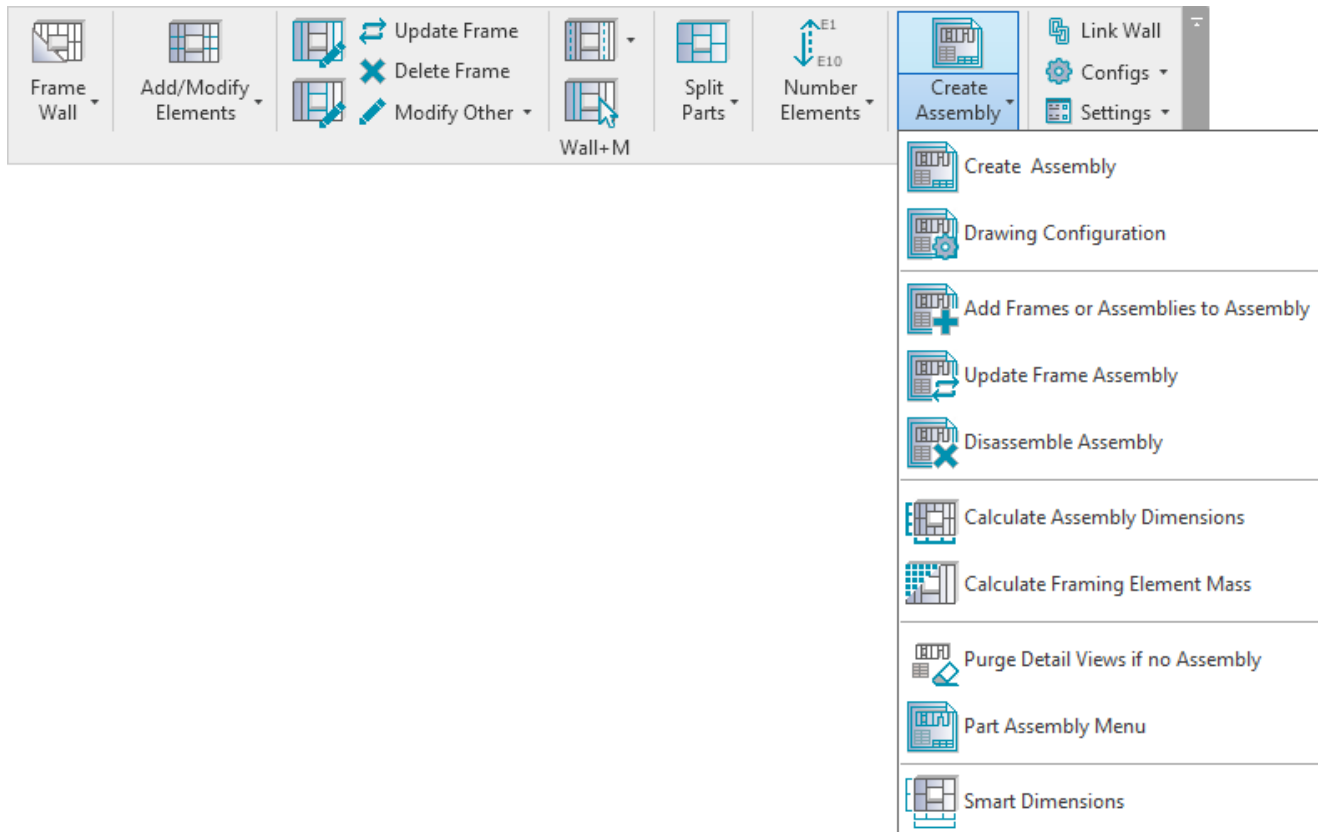


SHOP DRAWINGS – Main Features

Modified on: Sat, 7 Sep, 2019 at 9:24 PM

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



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

The drawing illustrates the workflow for creating shop drawings for a wall and window assembly. It includes:

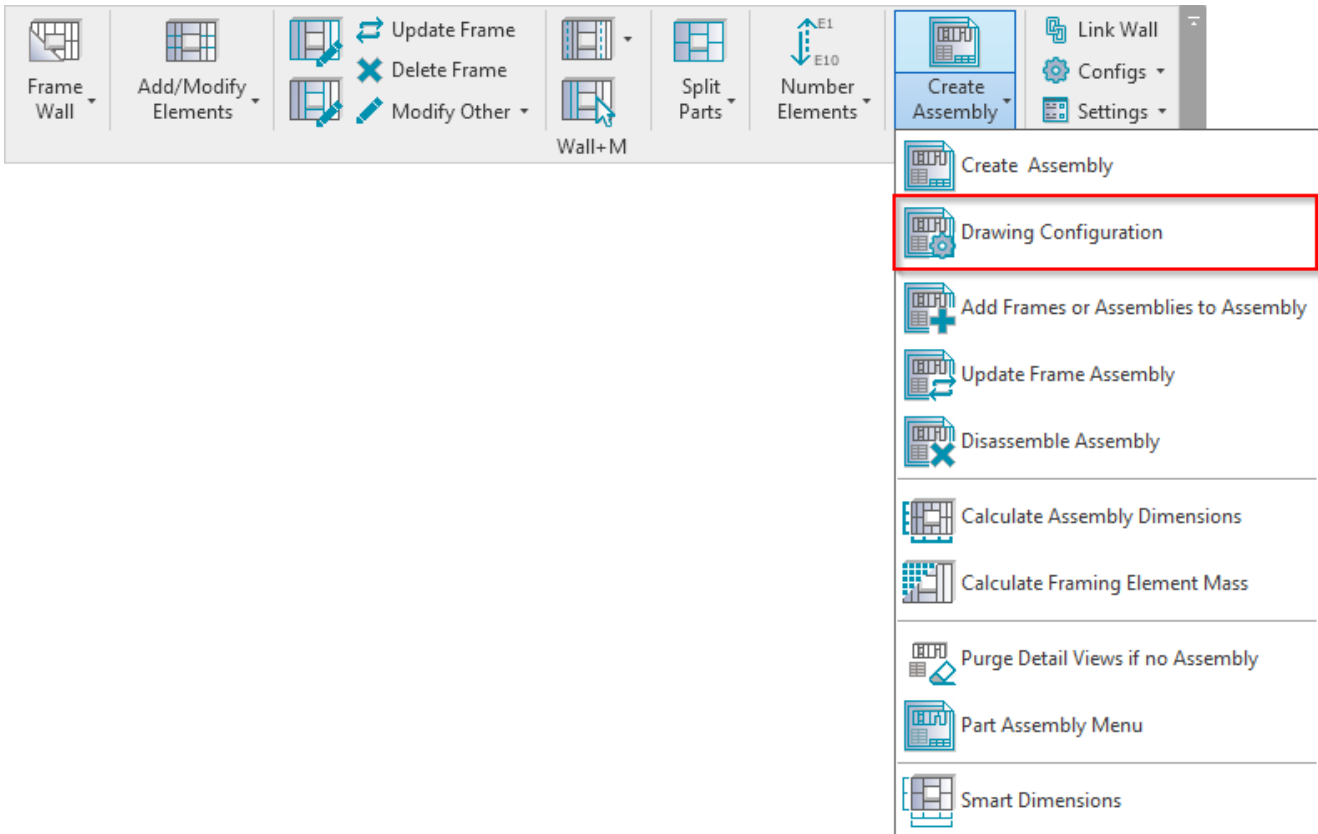
- Frame Schedule:** A table listing frame members with columns for Member Number, Size, Type, Length, Height, Count, and Framing Member Class.
- Assembly Schedule:** A table listing assembly members with columns for Member Number, Size, Type, Length, Height, Count, and Framing Member Class.
- Assembly Member List and:** A table listing assembly members with columns for Framing Member Number, Framing Member Size, Member Class, Count, and Framing Member Class.

Additional elements include elevation and section views of the wall and window assembly, a 3D perspective view of the assembly, and a title block containing the Autodesk Revit logo, project name, sheet name, and the identifier 'BTO'.

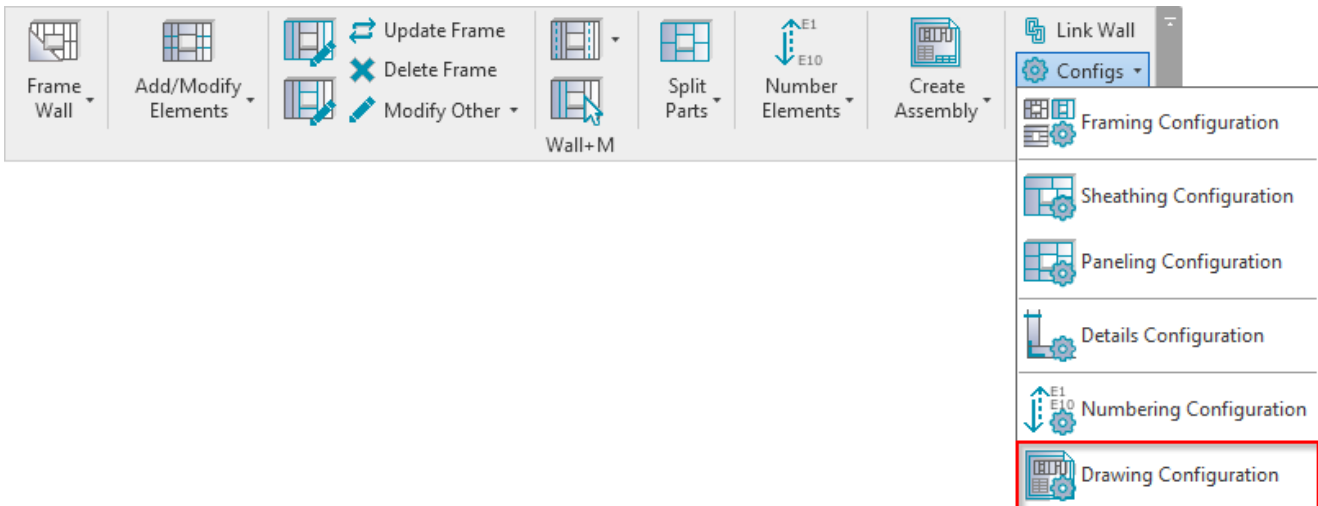
The basic shop drawing workflow consists of the following steps:

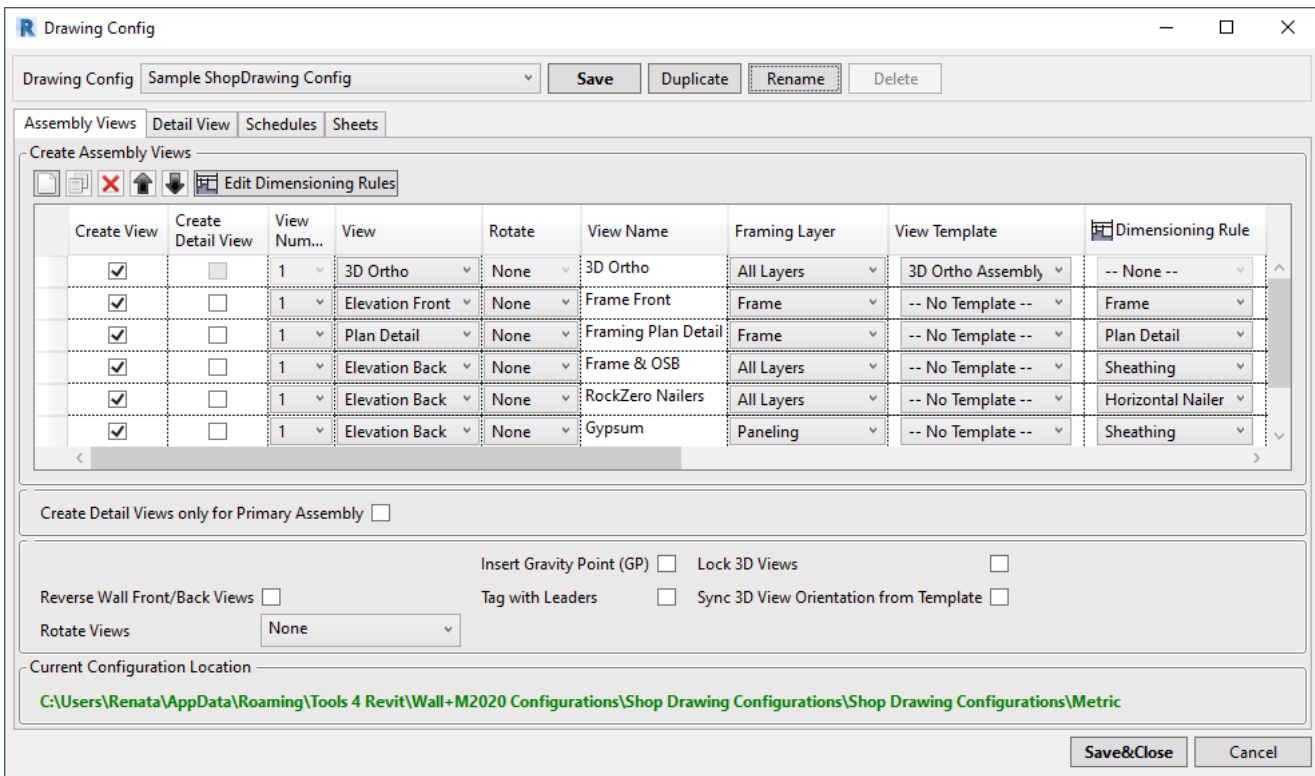
1. Wall+M → define **Drawing Configuration**
2. Wall+M → make shop drawings for one wall using **Create Assembly**
3. Wall+M → number the framing members
4. Add shop drawing views into the sheet for one wall and save it as a template for future walls
5. Wall+M → make shop drawings for other wall segments
6. Wall+M → update shop drawings if any changes have been made to the model

Drawing Configuration



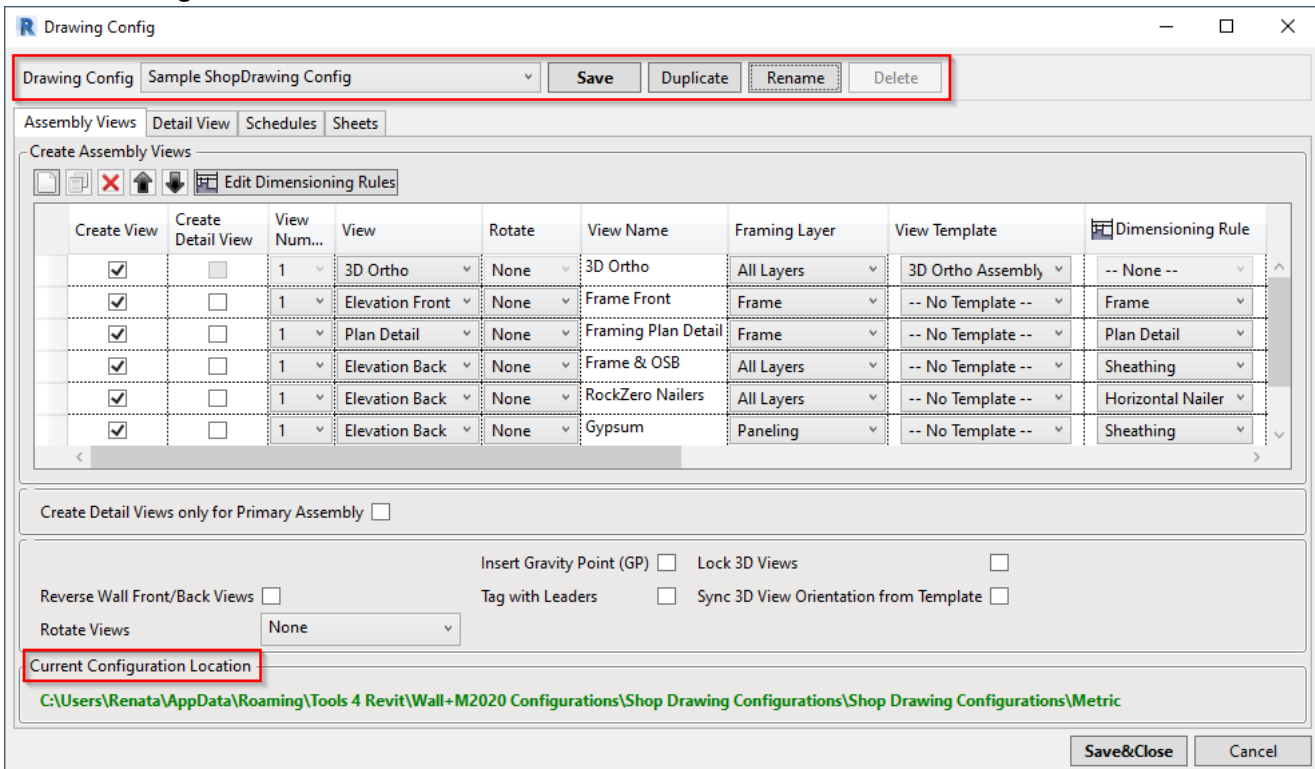
OR:



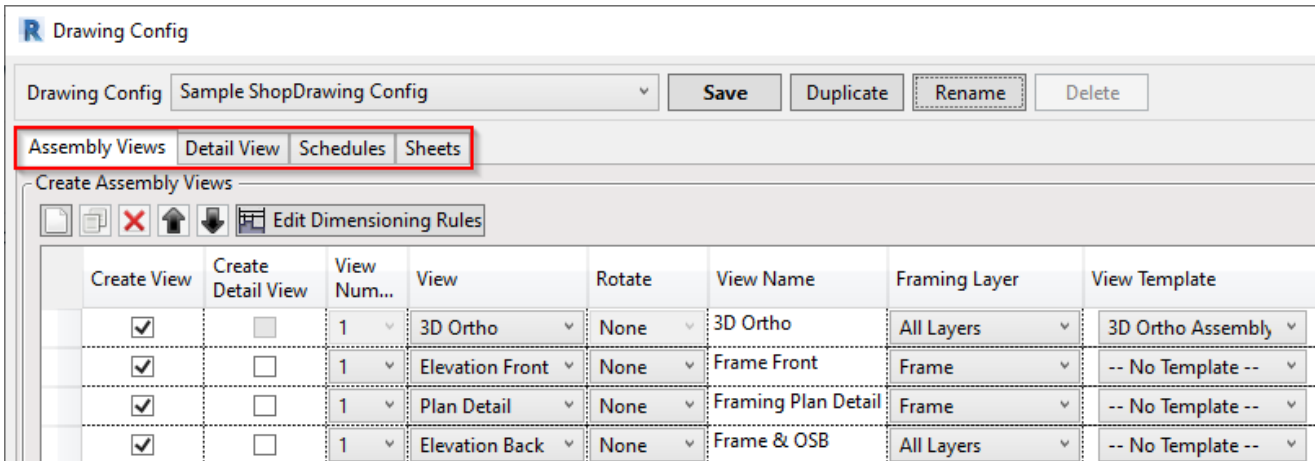


Drawing Configuration – predefine the settings for creating shop drawings. It is very versatile with thousands of different possibilities.

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



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

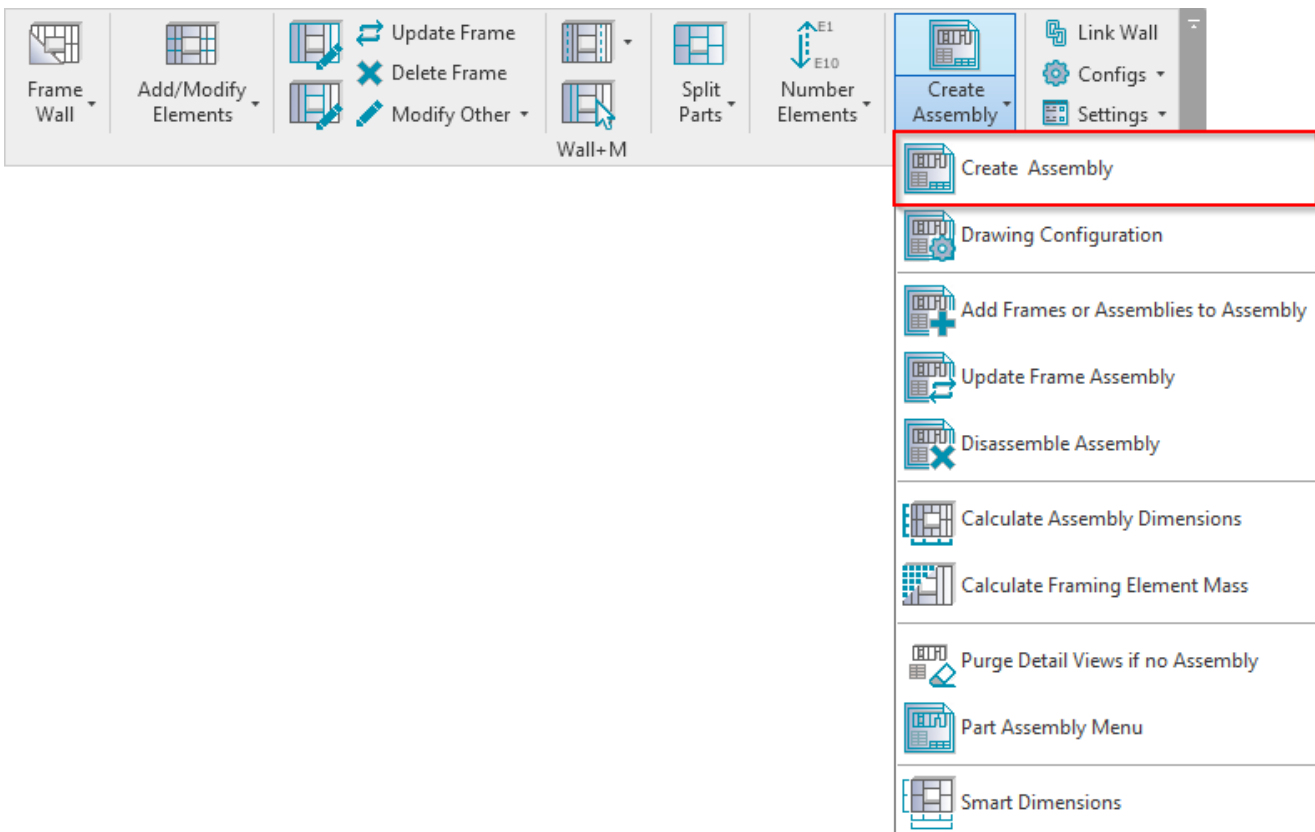


Read more about Assembly Views >> (<https://agacad.freshdesk.com/support/solutions/articles/44001794285-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-assembly-views>)

Read more about Schedules >> (<https://agacad.freshdesk.com/support/solutions/articles/44001794292-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-schedules>)

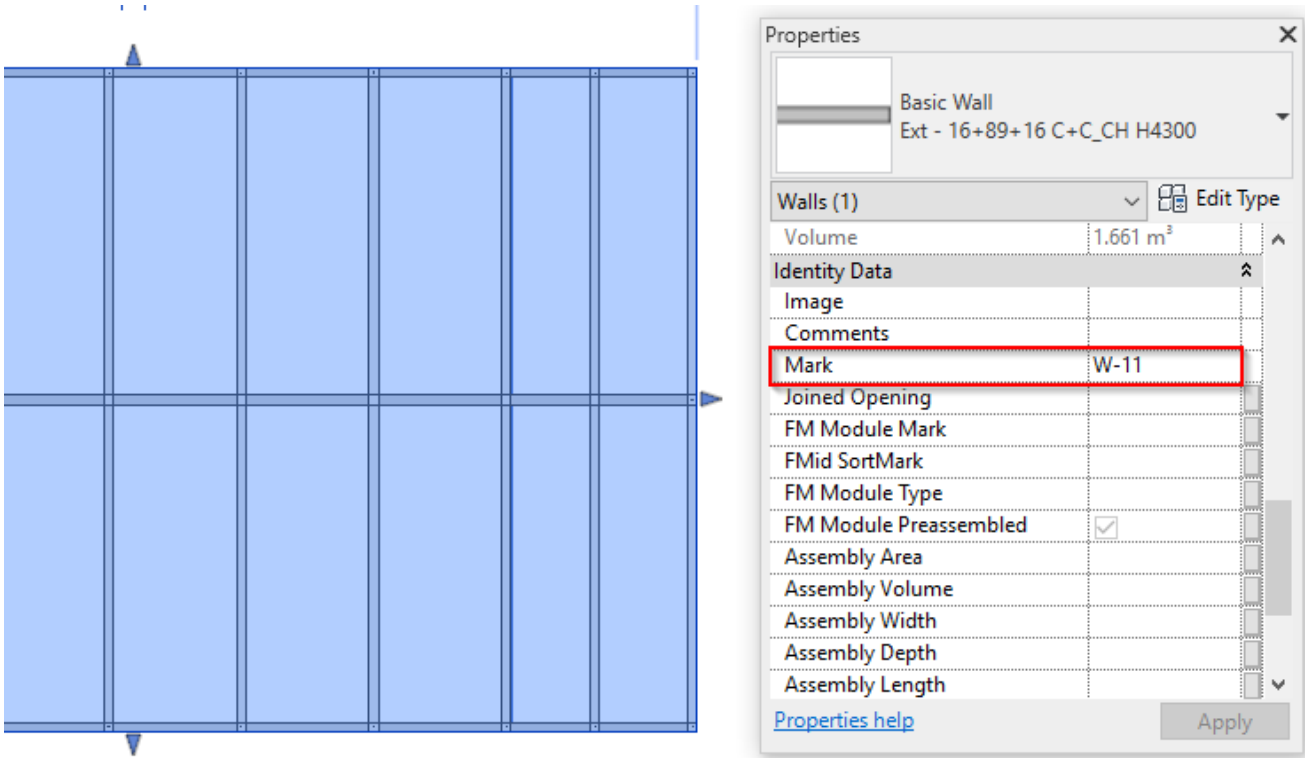
Read more about Sheets >> (<https://agacad.freshdesk.com/support/solutions/articles/44001794293-shop-drawings-%E2%80%93-drawing-configuration-%E2%80%93-sheets>)

Create Assembly



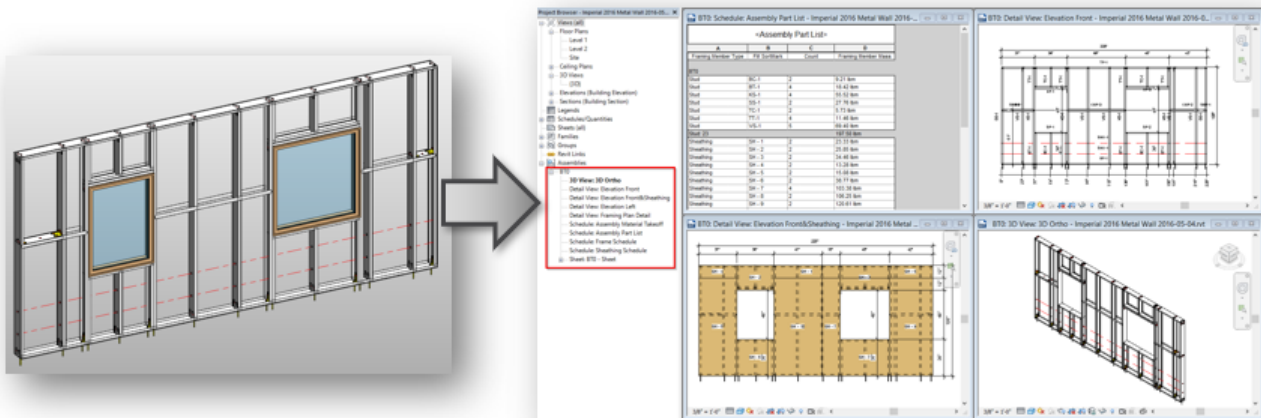
Create Assembly – makes shop drawings for selected walls. Select any frame from the wall, and after clicking **Create Assembly**, the software will create shop drawings according to the predefined configuration.

*Mandatory condition: selected wall needs to have a **Mark** value assigned:*

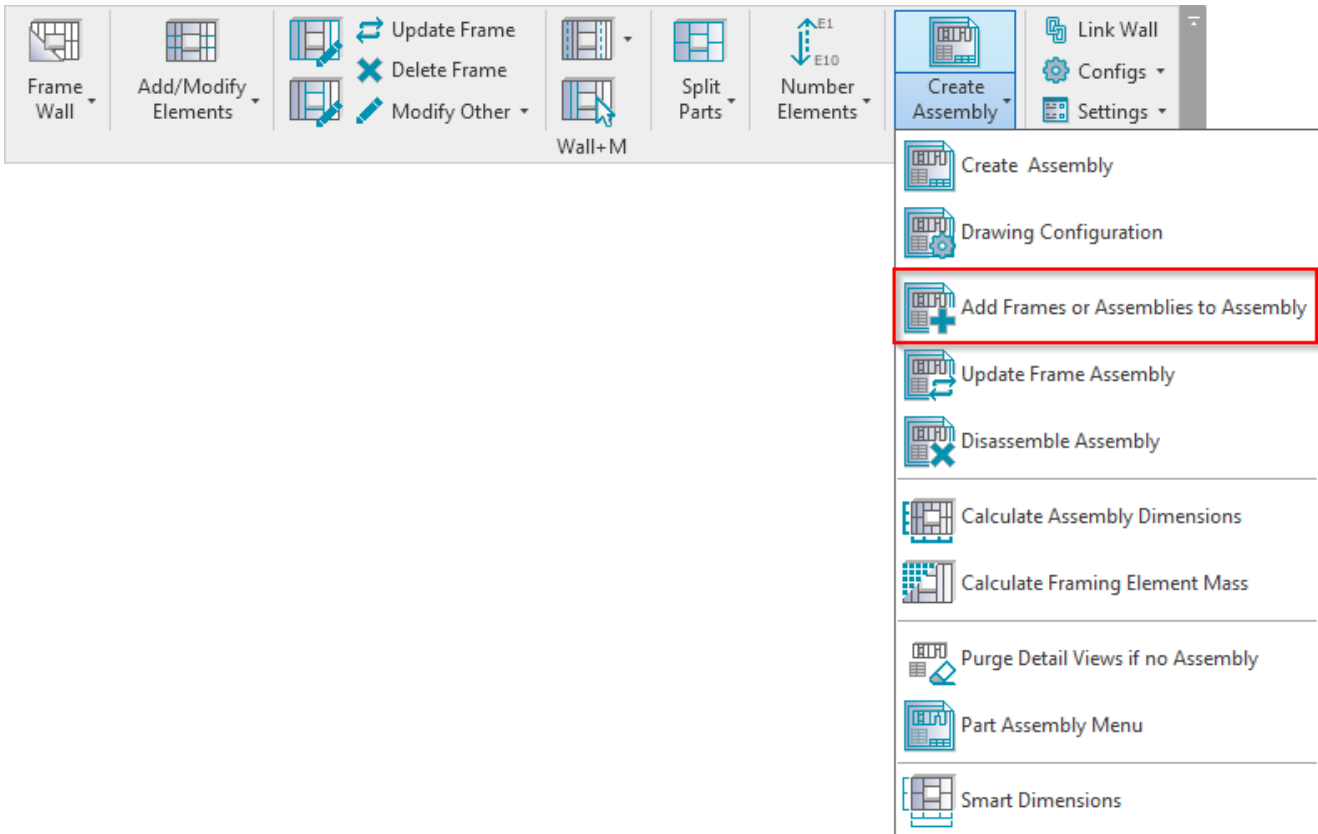


This value will be used as the assembly name. You can find shop drawings in **Project Browser** under **Assemblies**.

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



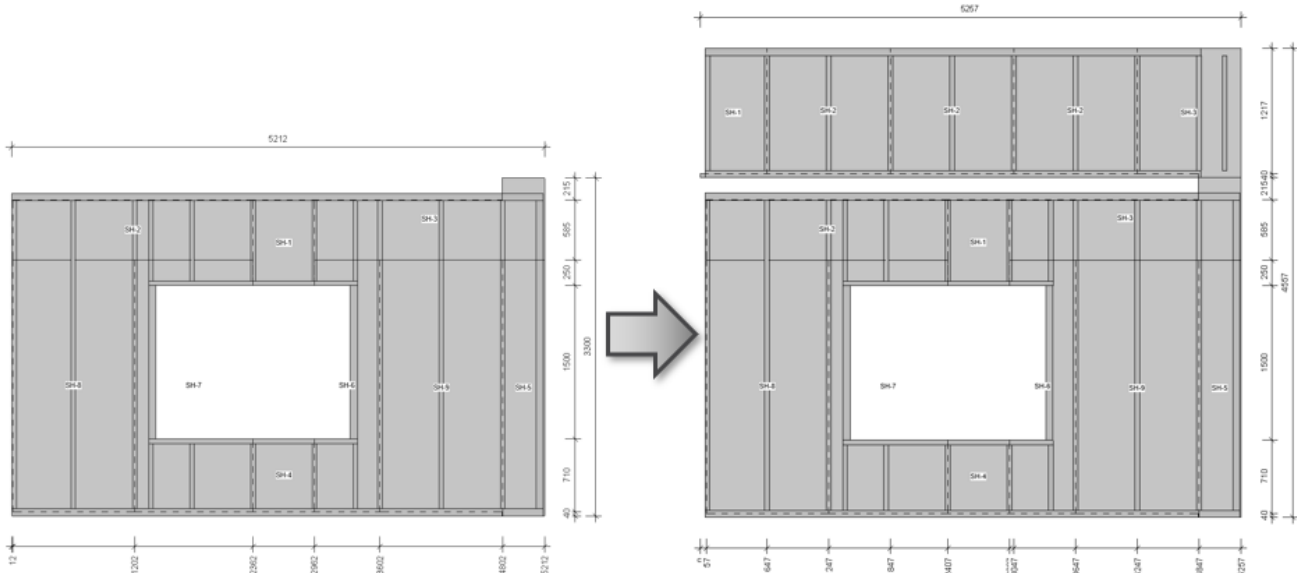
Add Frames or Assemblies to Assembly



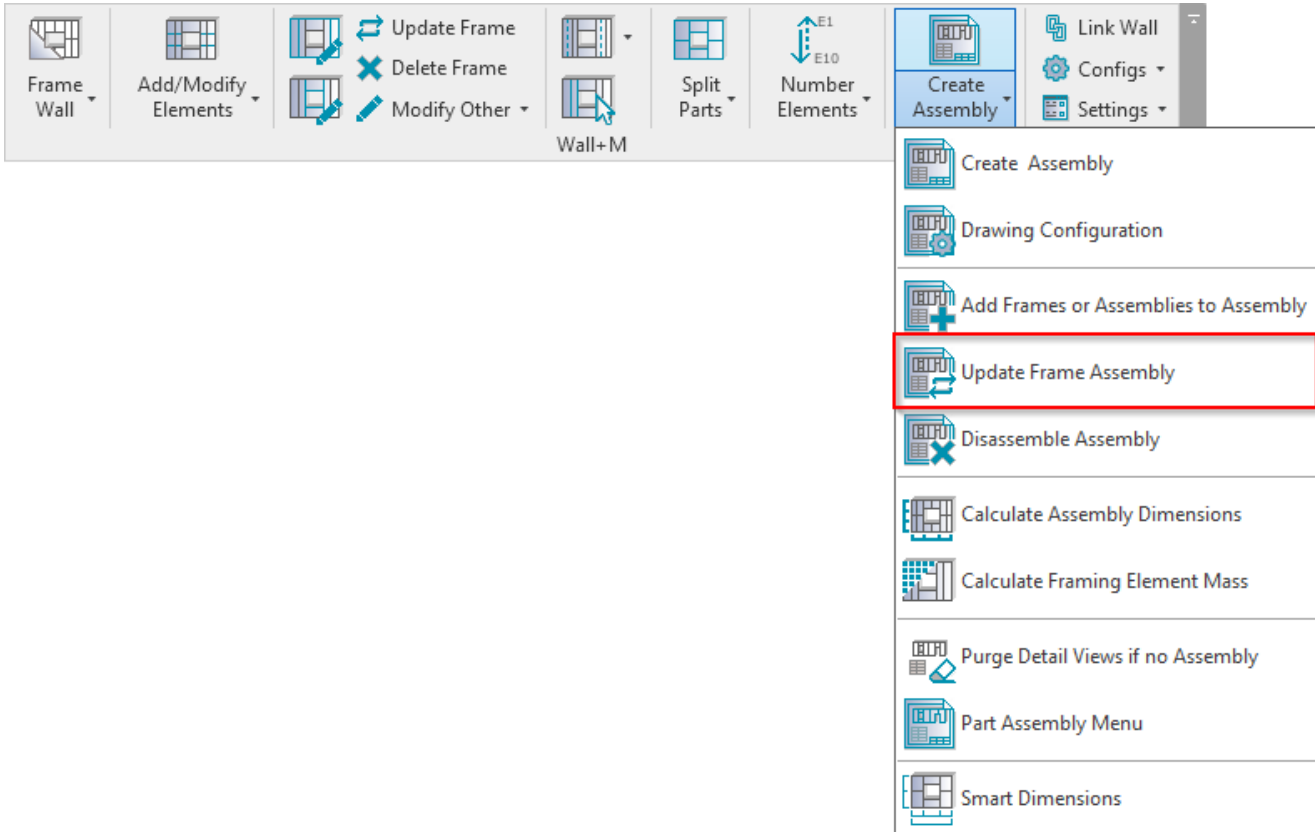
Add Frames or Assemblies to Assembly – adds all elements from the wall or assemblies to the existing assembly.

In order to add all elements from the wall, you just need to select any one frame from that wall and click **Finish** in the top left corner.

Result:

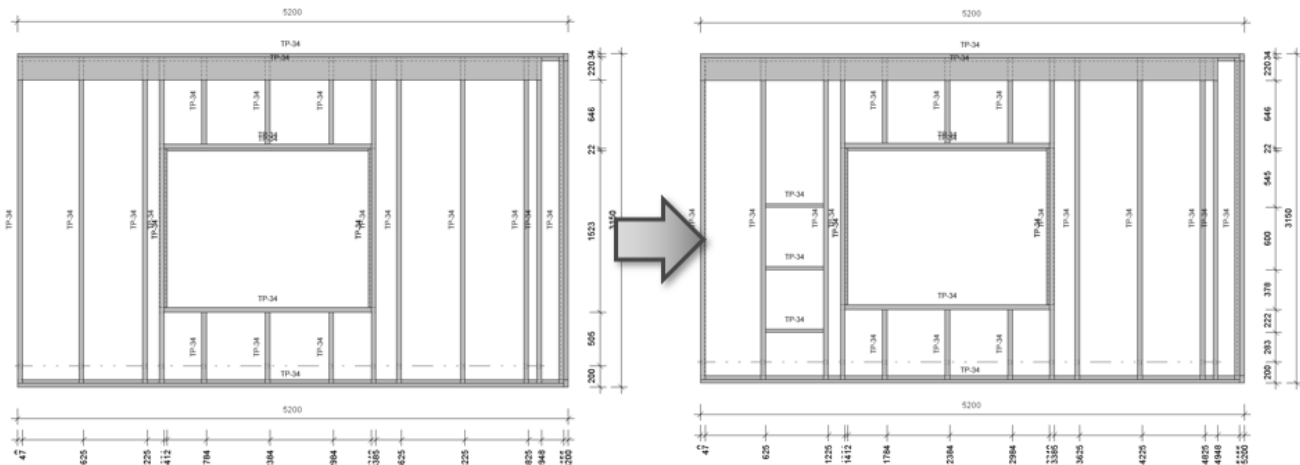


Update Frame Assembly

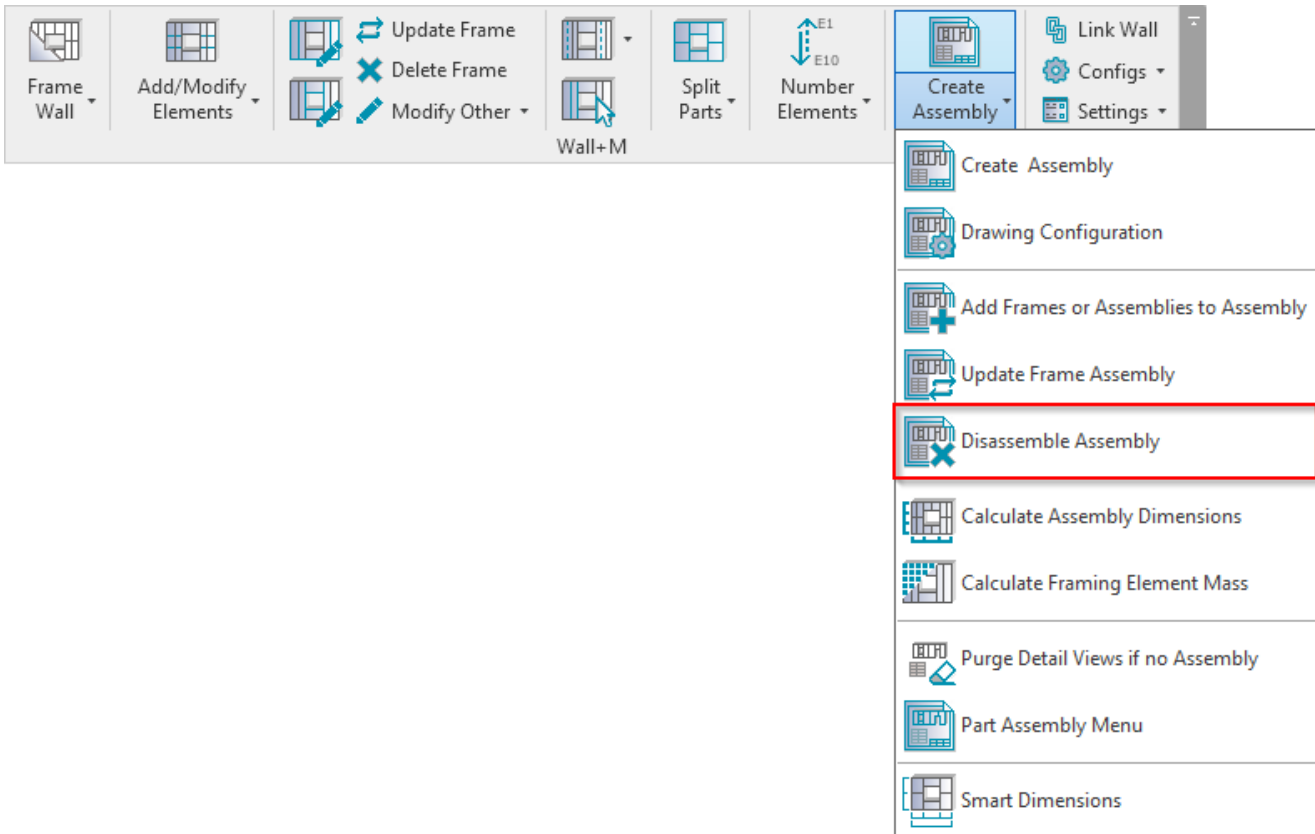


Update Frame Assembly – updates the selected assembly if any changes were made to the framing or to the Drawing Configuration.

Example: additional bridging was added to the wall. Result after updating:



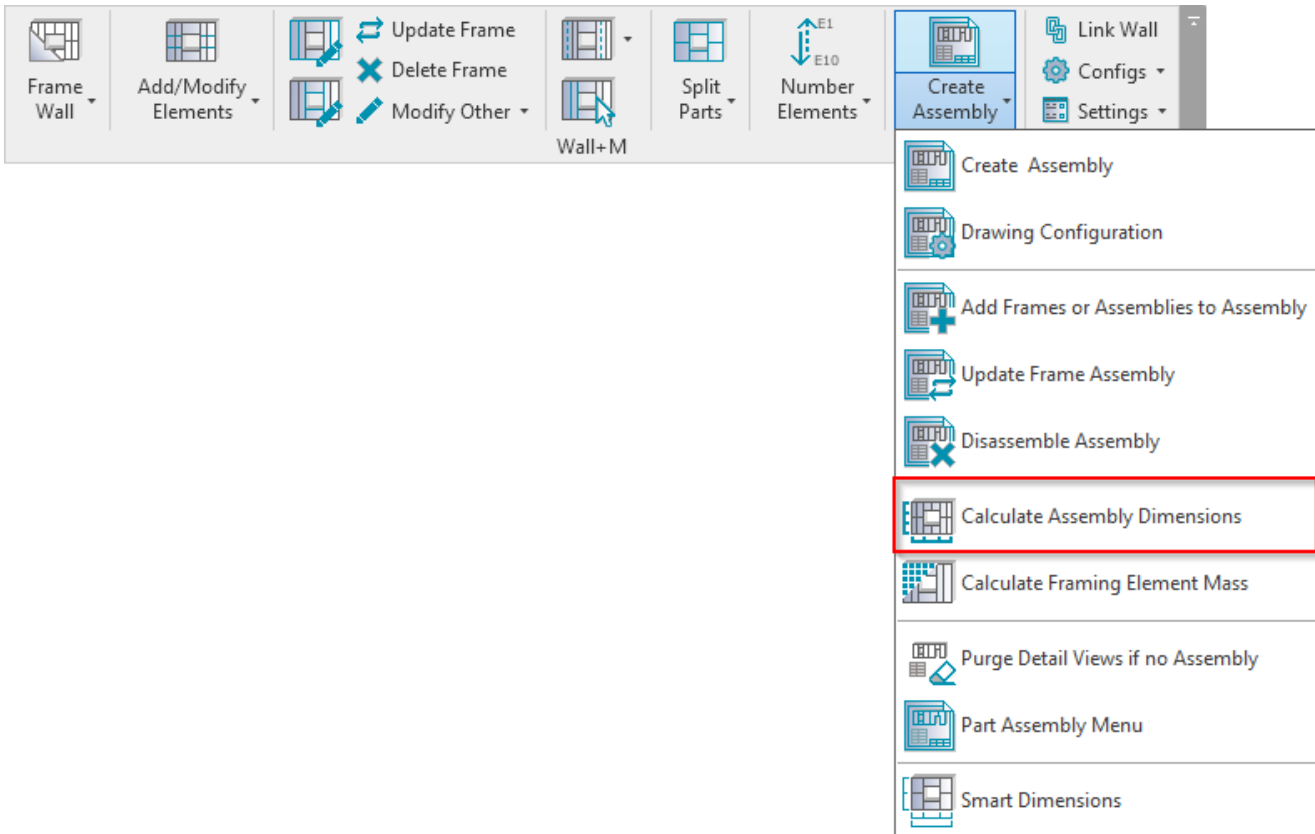
Disassemble Assembly



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

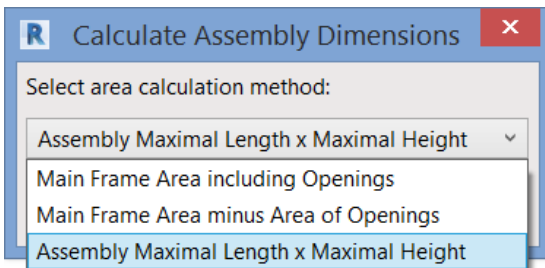
Recommended workflow: Instead of **Revit** → **Disassemble**, we recommend using **Wall+M** → **Create Assembly** → **Disassemble Assembly** as it doesn't show unnecessary pop-ups and deletes the gravity point.

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:

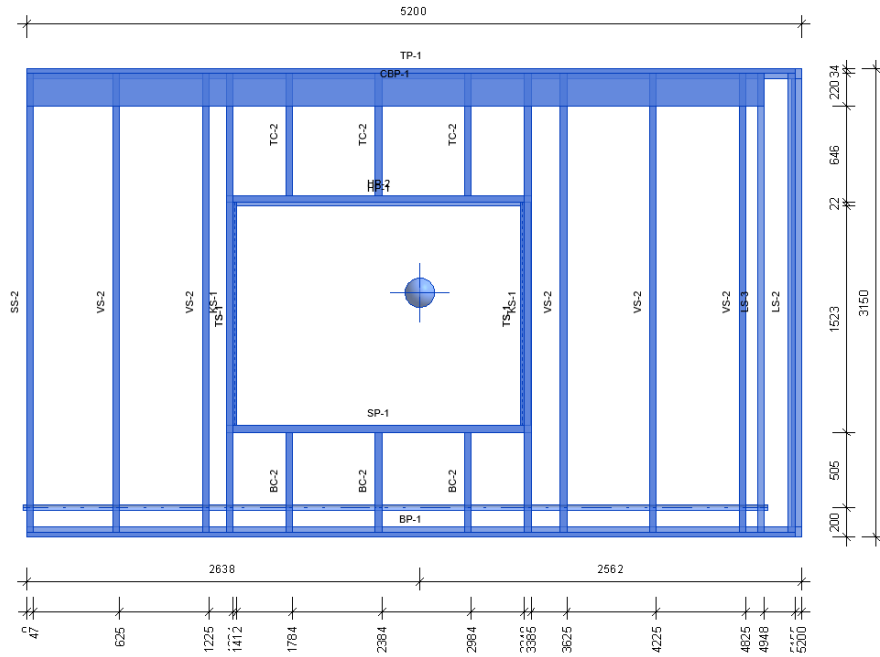
Properties

Structural Framing Assembly
W-4

Assemblies (1) Edit Type

Naming Category	Structural Framing
Image	
Comments	
Mark	W-4
Framing Member	Assembly
Framing Member Type	Assembly
Framing	Wall
Framing Member Descript...	Assembly
FM SortMark	
Framing Layer	Frame
Framing Member Mark	AS
FM HostMemberSortMark	W-4
Framing Member Mass	614.728 kg
Framing Member Volume	1.081 m ³
Assembly Area	13.424 m ²
Assembly Volume	7.266 m ³
Assembly Width	396.0
Assembly Depth	396.0
SDC	Frame Example
Assembly Length	5510.0
Assembly Height	3330.0
Phasing	
Phase Created	Phase 1
Phase Demolished	None

Properties help Apply



Calculate Framing Element Mass

Frame Wall Add/Modify Elements Update Frame Delete Frame Modify Other Wall+M Split Parts Number Elements Create Assembly Link Wall Configs Settings

Create Assembly

Drawing Configuration

Add Frames or Assemblies to Assembly

Update Frame Assembly

Disassemble Assembly

Calculate Assembly Dimensions

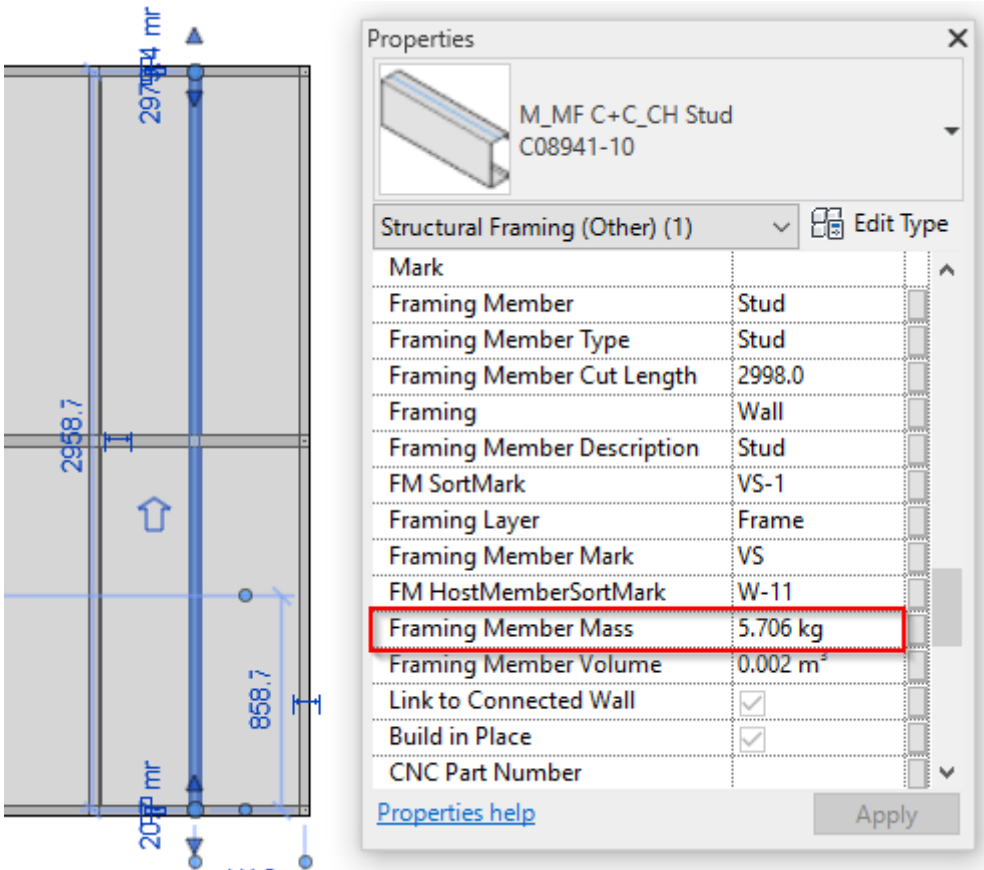
Calculate Framing Element Mass

Purge Detail Views if no Assembly

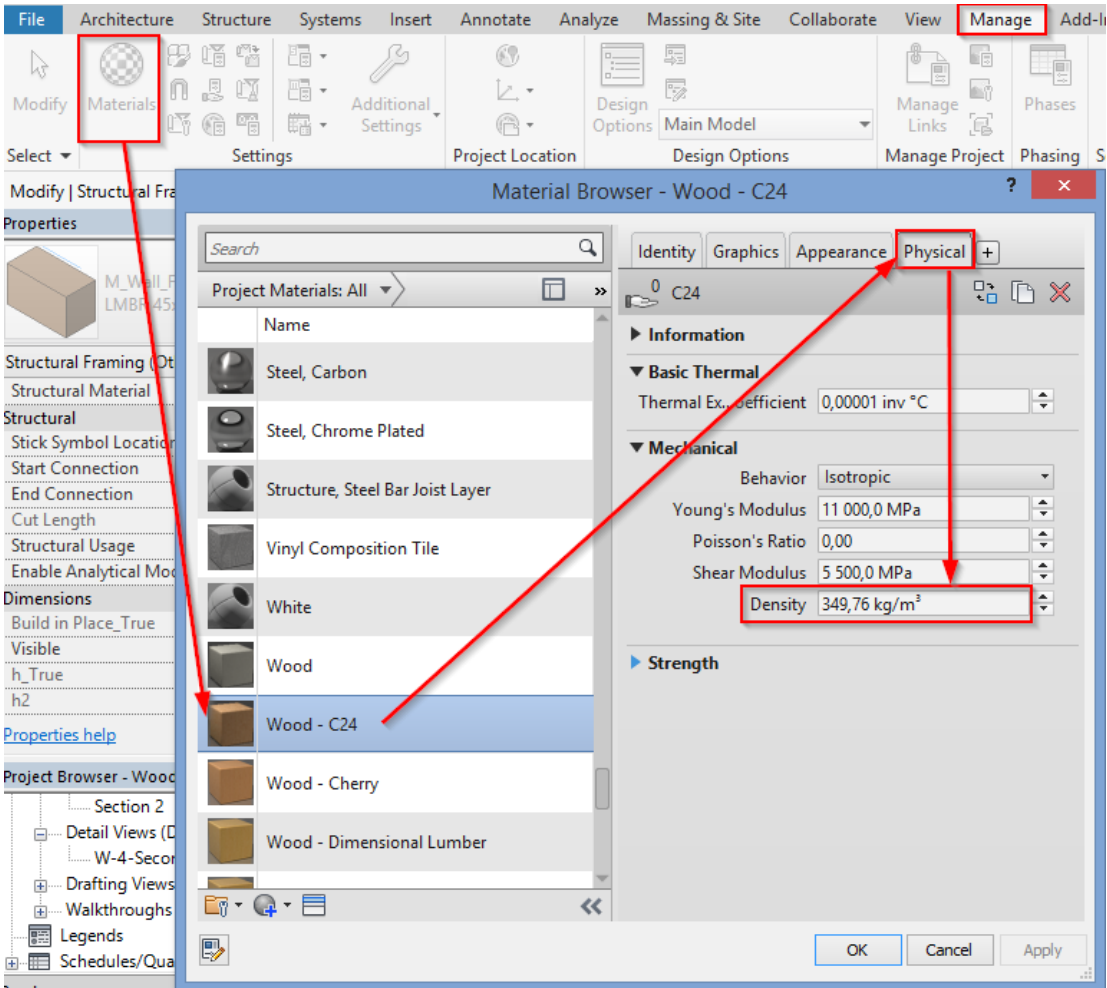
Part Assembly Menu

Smart Dimensions

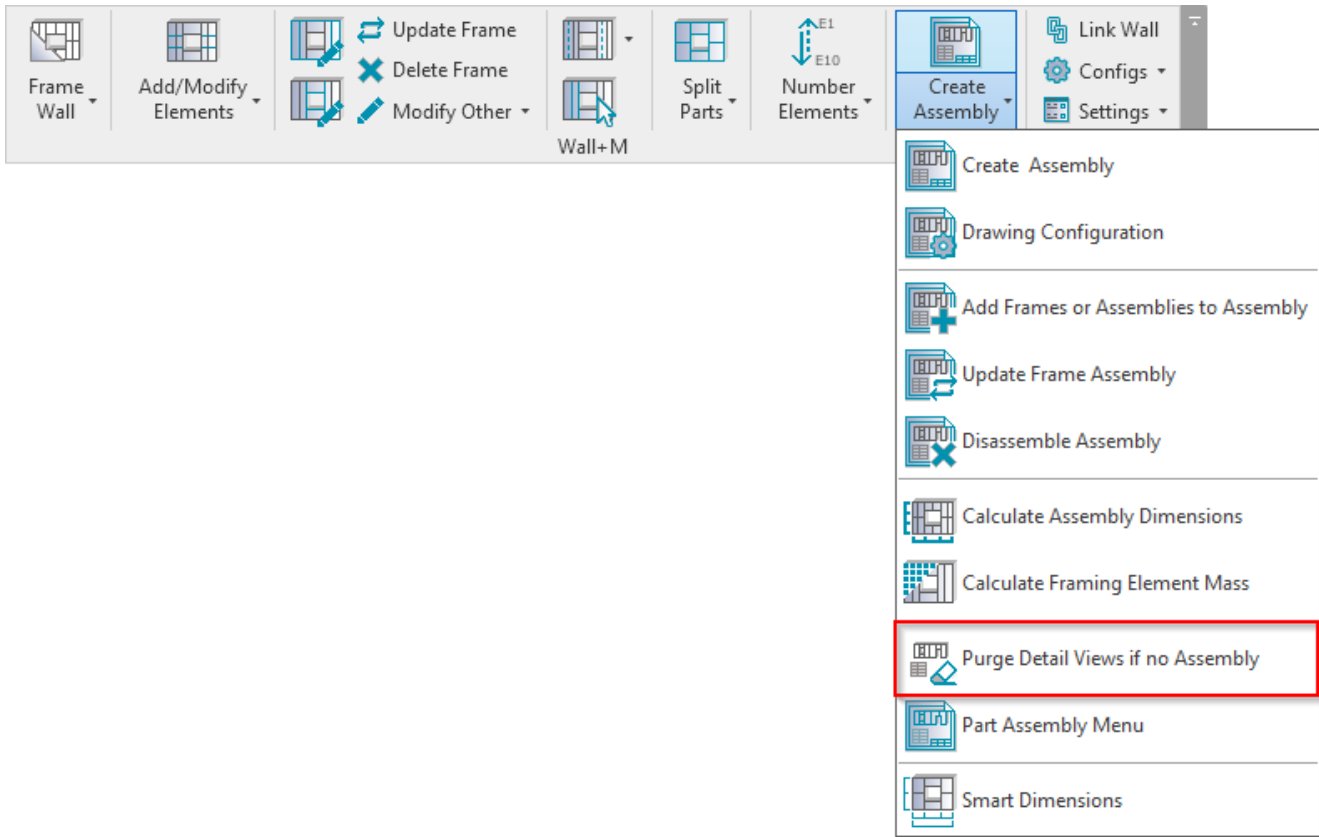
Calculate Framing Element Mass – calculates mass of selected framing elements, and writes result to **Framing Member Mass** parameter, which you can find in **Element Properties** → **Identity Data**.



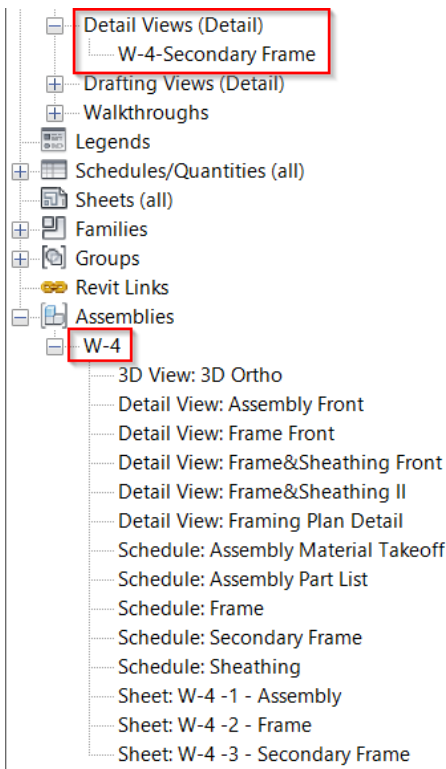
Density parameter must be filled in for the element in **Materials** → **Physical** tab:



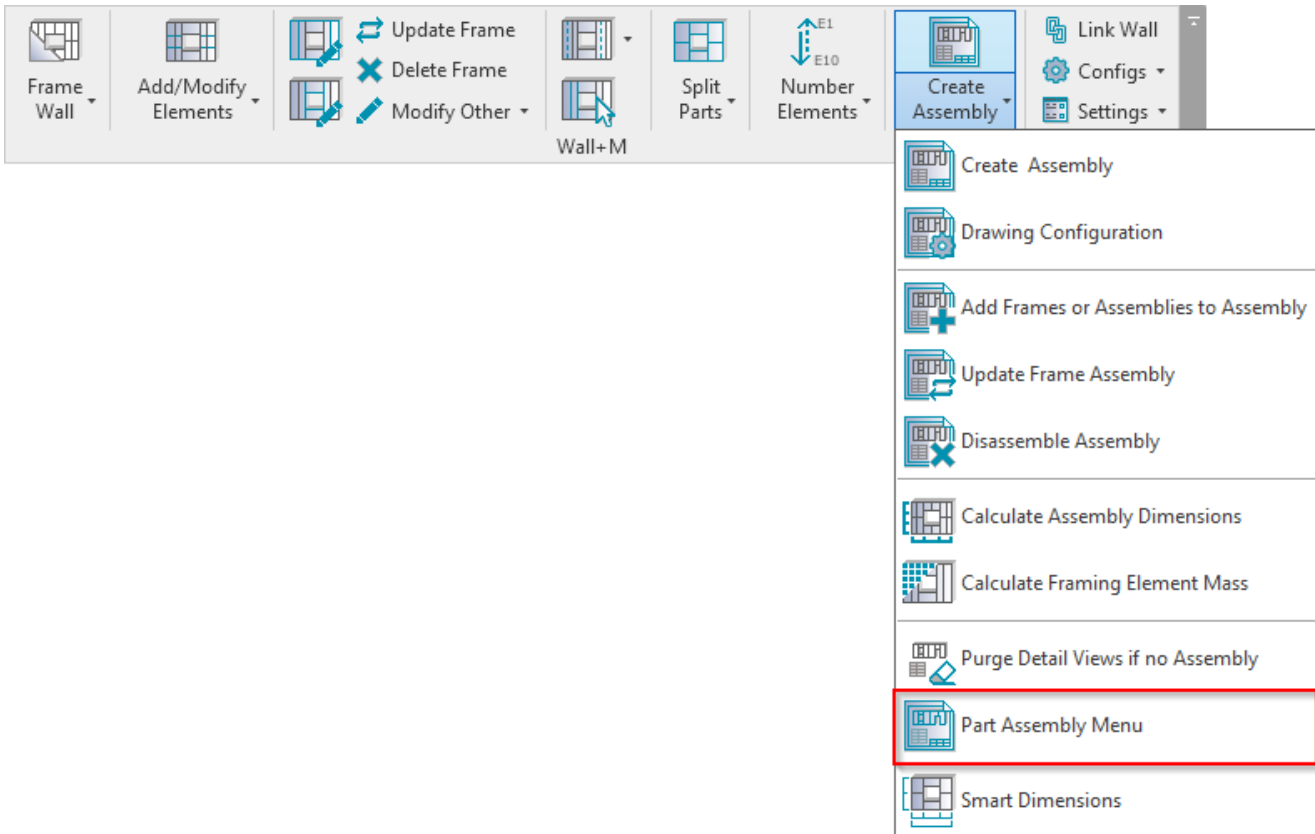
Purge Detail Views if no Assembly



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



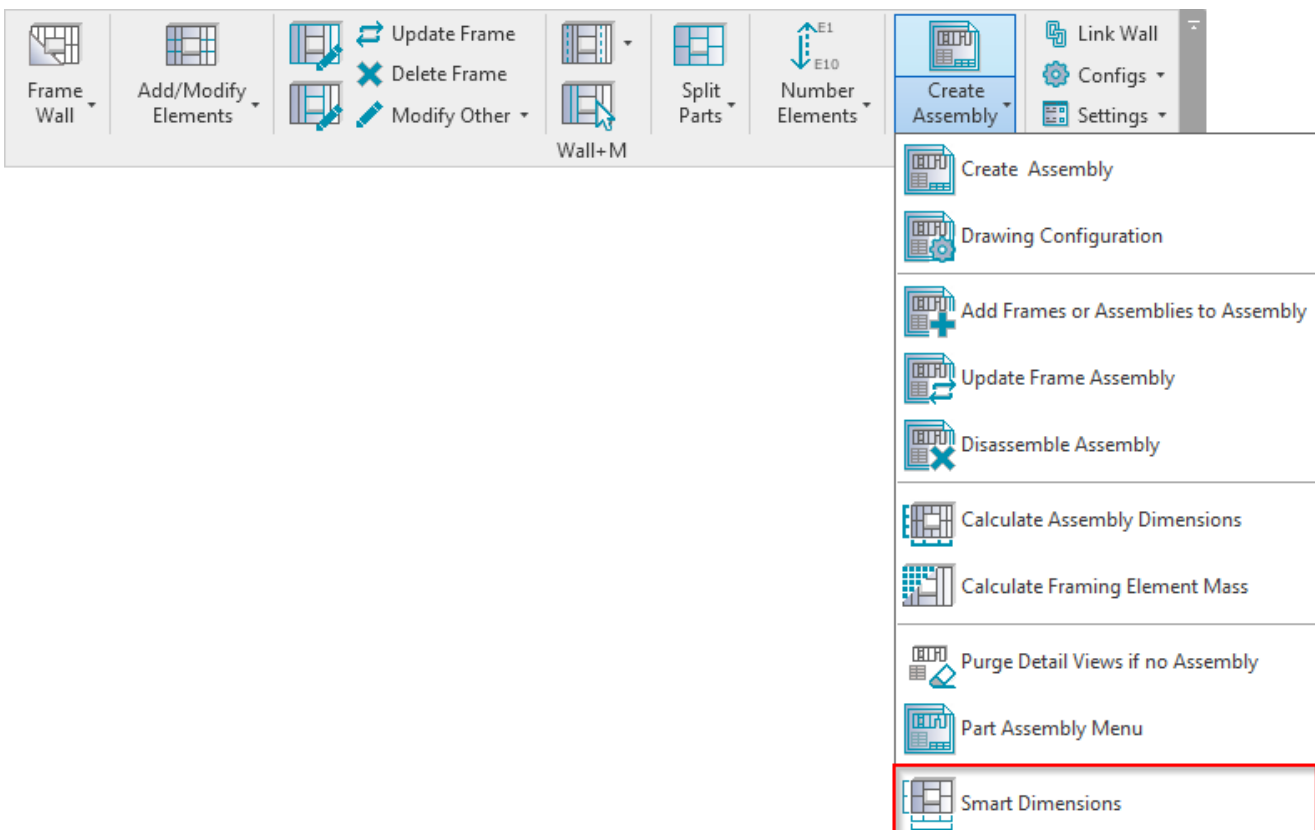
Part Assembly Menu



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

Read more >> (<https://agacad.freshdesk.com/support/solutions/articles/44001794295-shop-drawings-%E2%80%93-part-assembly-menu>)

Smart Dimensions



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

Read more >> (<https://agacad.freshdesk.com/support/solutions/articles/44001794296-shop-drawings-%E2%80%93-smart-dimensions-%E2%80%93-main-features>).