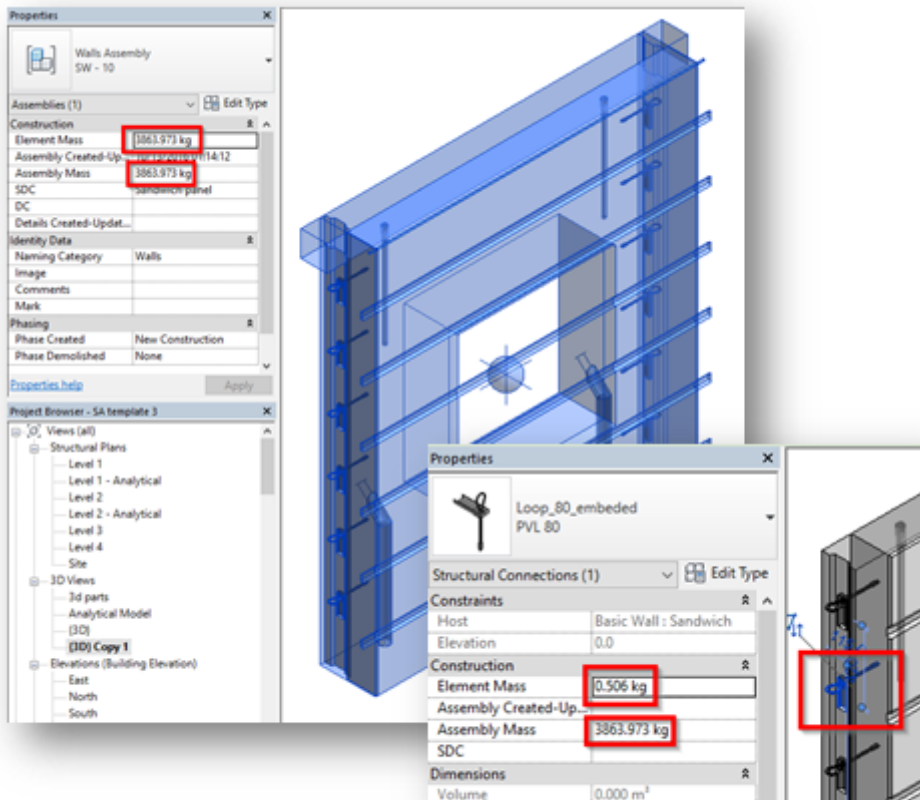


Gravity Point and Element Mass

Modified on: Fri, 12 Jun, 2020 at 10:51 AM

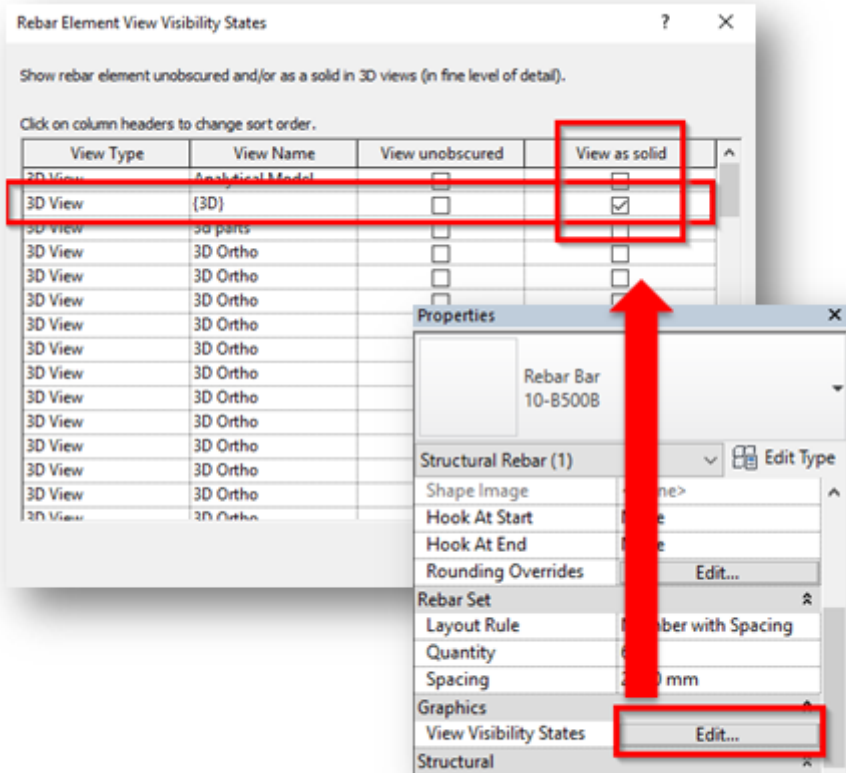
Smart Assemblies can calculate all Element masses and insert the Gravity Point at the center of gravity of an Assembly.

After the Smart Assembly has been created, all elements will have Element Mass and Assembly Mass parameters with calculated values.



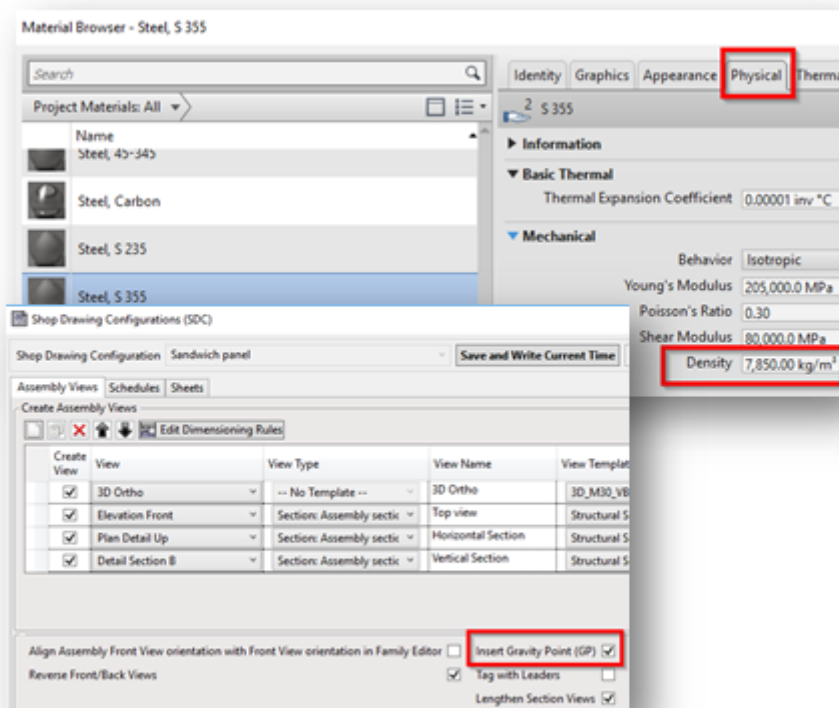
To calculate Structural Rebar Element Mass, you must create an assembly from 3D view where Visibility of rebar is Enabled.

Mass of Fabric Sheets is not calculated because they are not solid objects in Revit and have no influence on the location of the Gravity Point.



To insert the Gravity Point, a few requirements must be fulfilled:

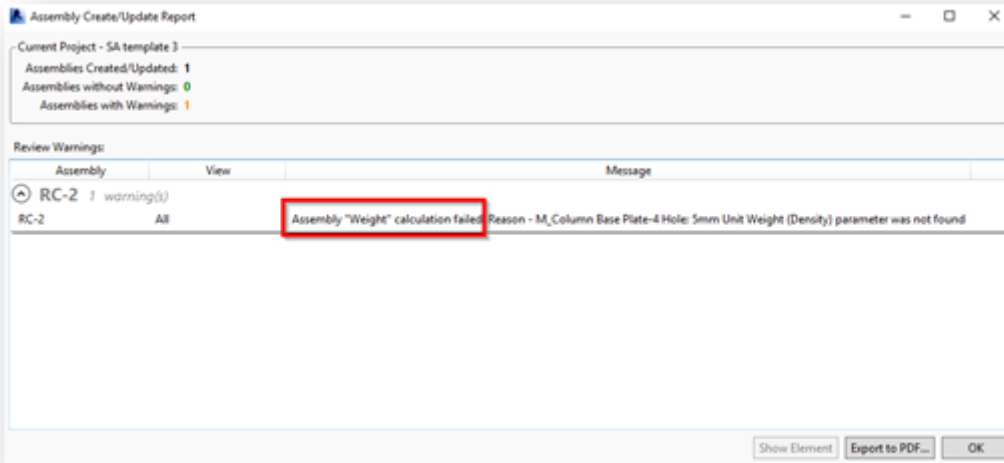
1. All solid elements of the given assembly must have Material with Physical properties assigned, including Density parameter.
2. In Shop Drawing Configurations, tick 'Insert Gravity Point (GP)' ON.



If you get a warning message like the one below, it means that at least one of your elements/solids has an incorrect material or no material assigned.

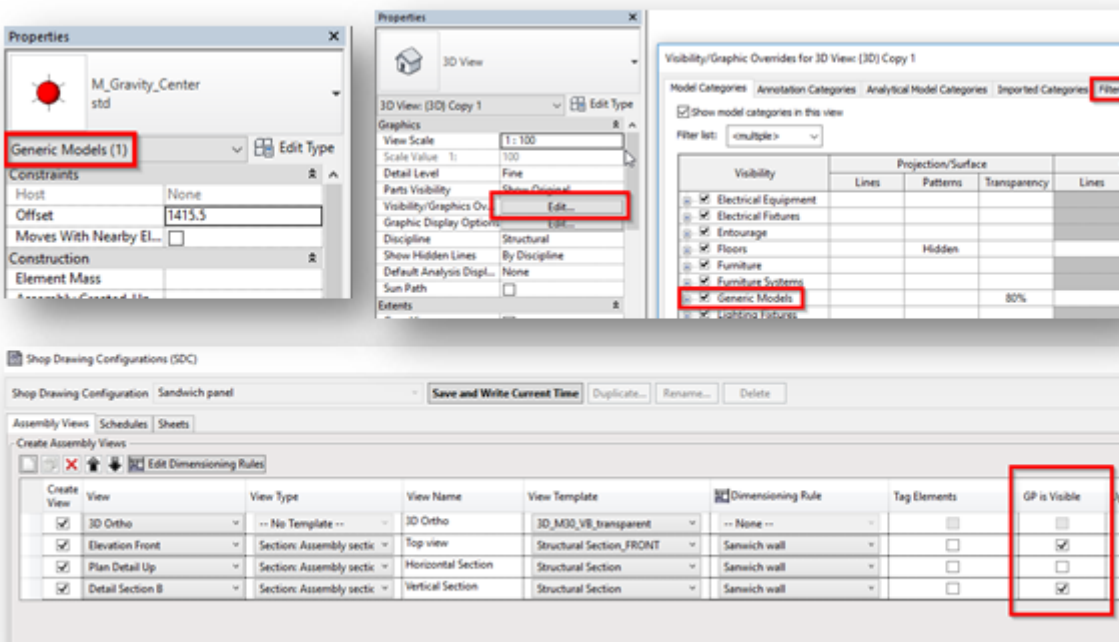
The name of the element's Family is also displayed.

You should make sure that all solids in that Family have Materials with Physical properties assigned.



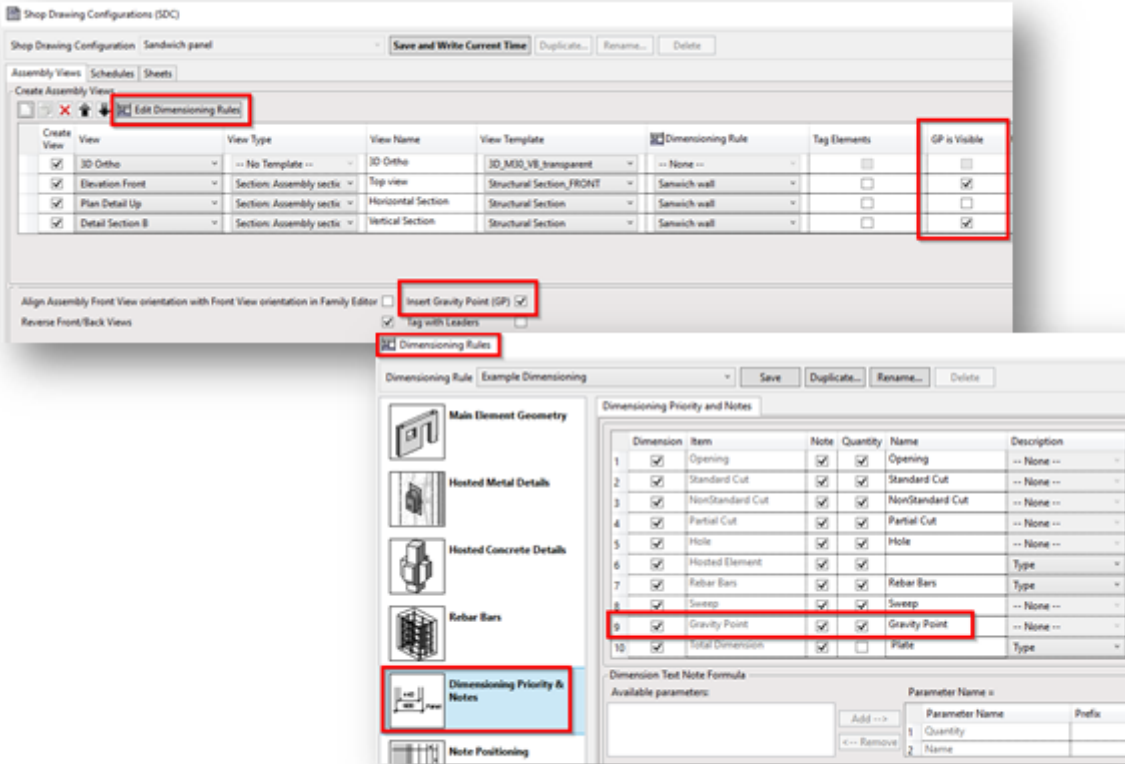
By default, the Gravity Point is visible in general views as a Generic Model element, but you can control its visibility with standard Revit Visibility/Graphics options.

To make it visible in Assembly views, you have to tick ON 'GP is visible' in Shop Drawings Configuration.

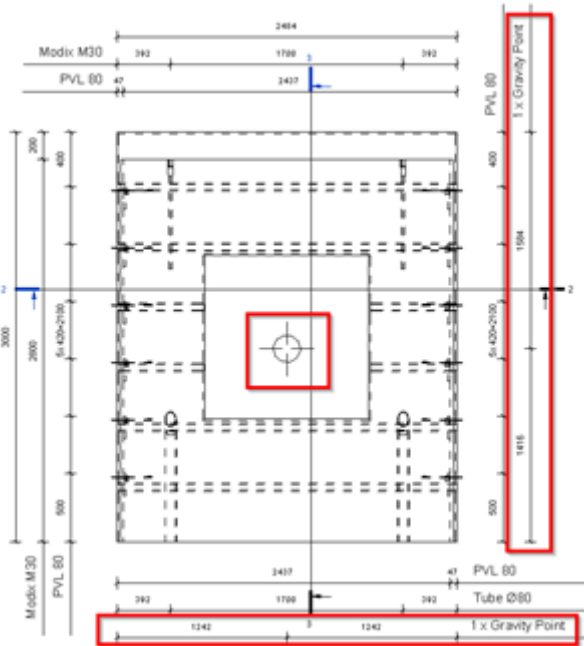


To dimension the Gravity Point in Smart Assembly views:

1. Tick ON 'Insert Gravity Point' and make it visible in the view you want (in SDC).
2. In the Dimensioning Rules window, tick ON 'Note' and 'Dimension' checkboxes for Gravity Point.



Dimensions and Notes will be generated in selected views.



Smart Assemblies works with multilayered elements as well.

