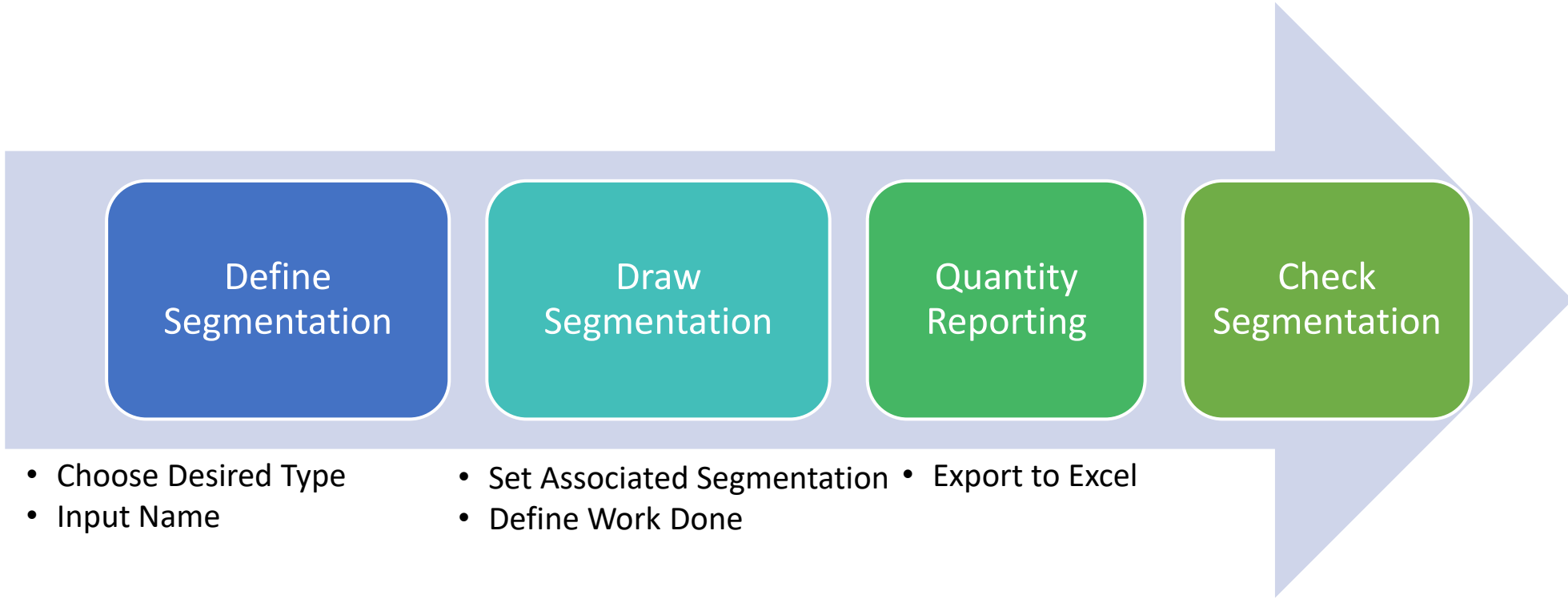
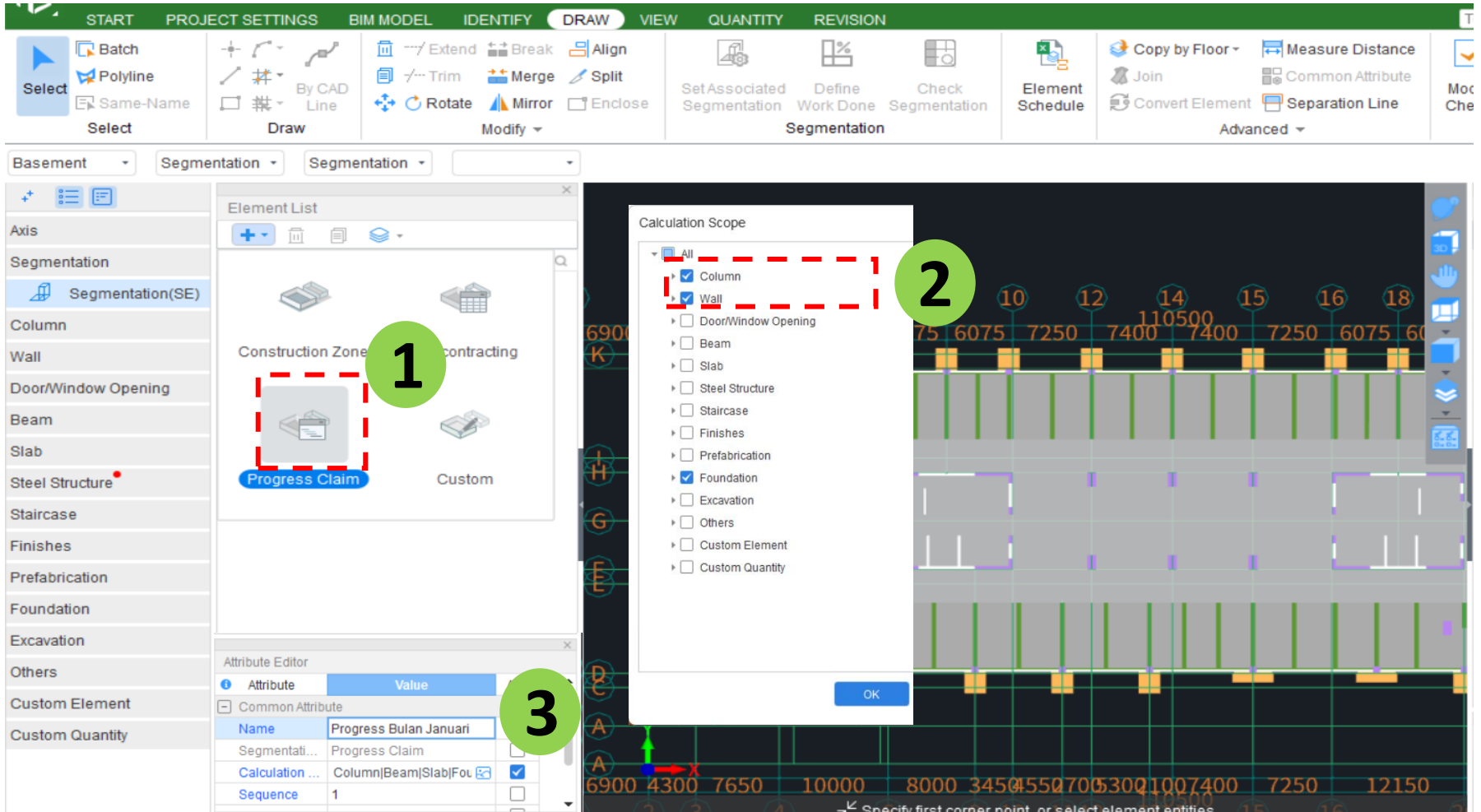
Segmentation: Foundation, Column, & Wall

Progress Claim Flow



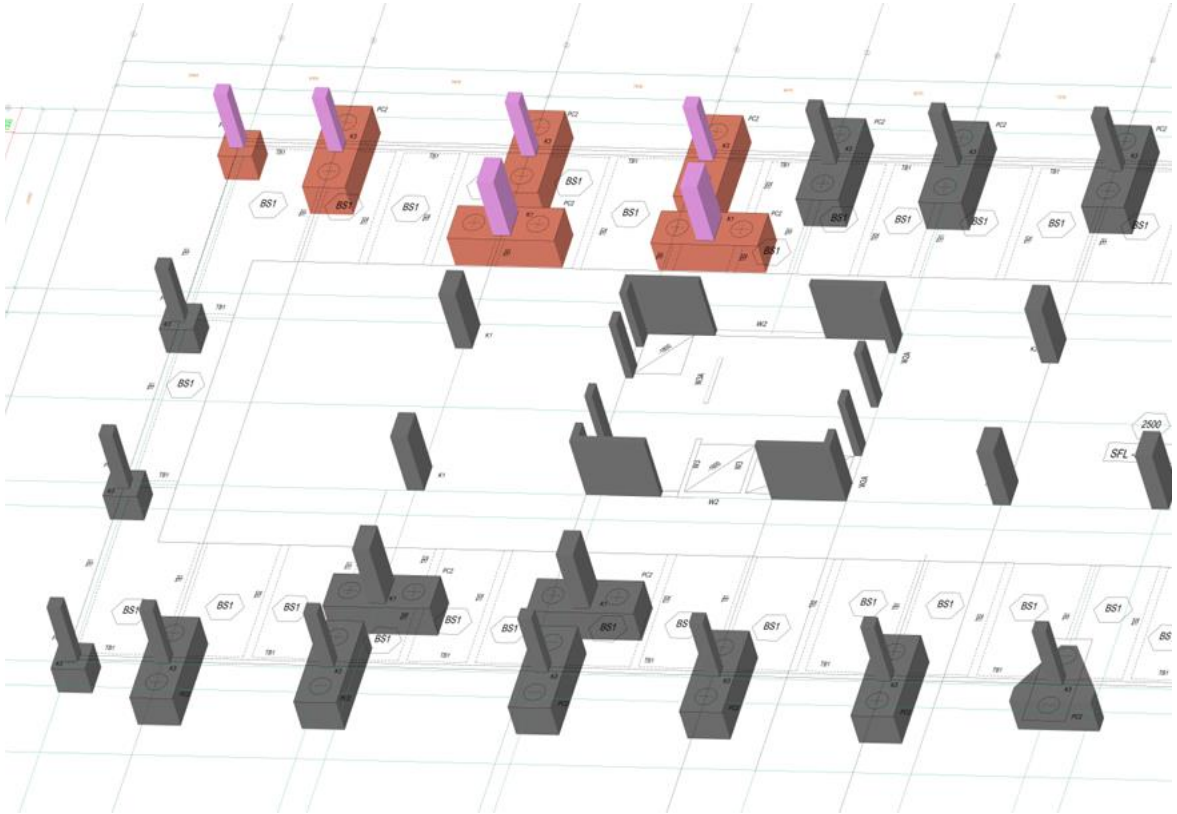
Define Segmentation

- Step 1: New Element List → Construction Zone/Subcontracting/Progress Claim/Custom
- Step 2: Choose Specific Element for the Scope
- Step 3: Input Name



Draw Segmentation – Specific Element

Case: Vertical Element Work Based on Entities



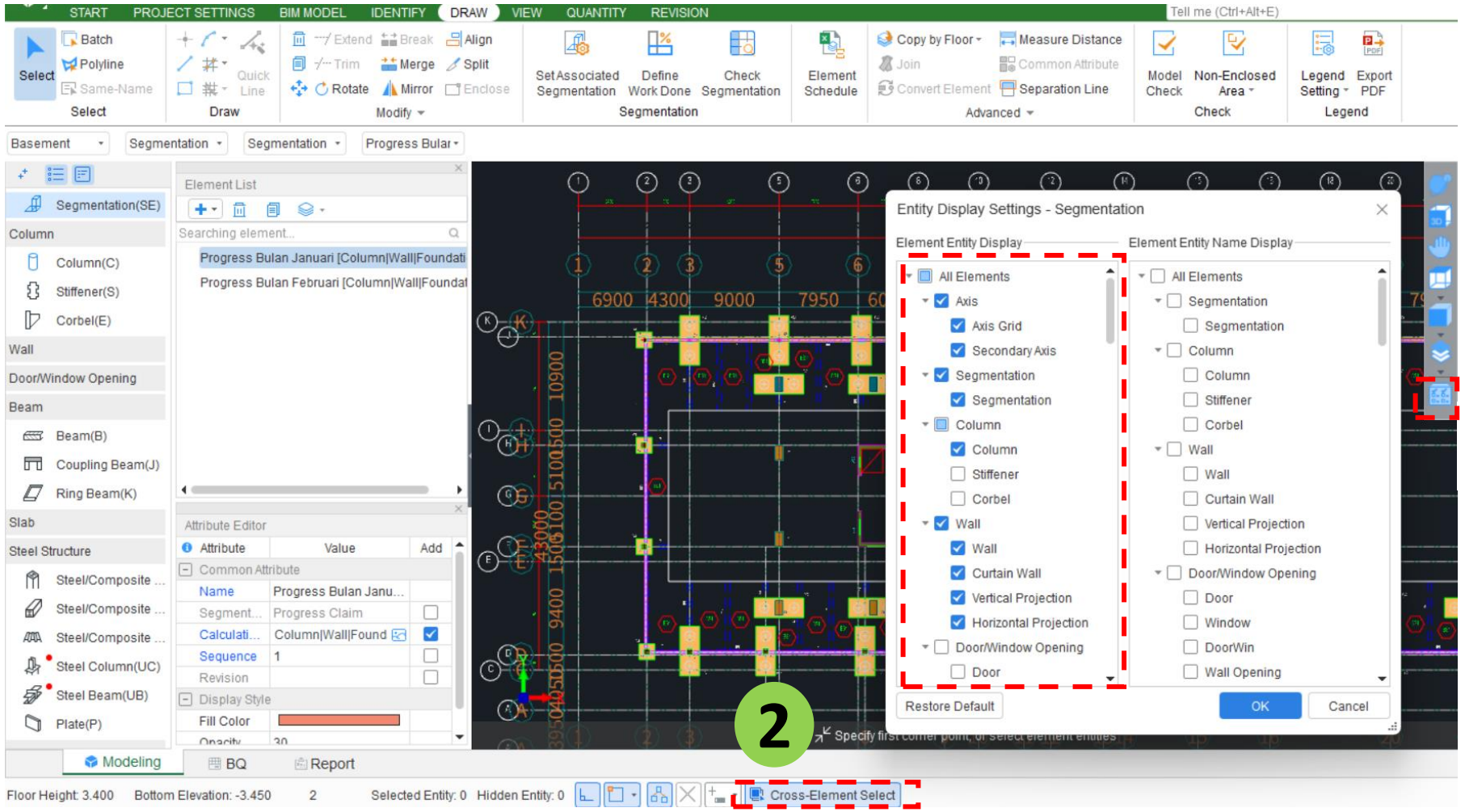
Vertical elements such as pile caps, columns, and walls are constructed individually at specific points.

Segmentation by area is ineffective for these elements, requiring users to manually draw regions that cover specific components.

The **Set Associated Segmentation** feature allows zones to be defined per entity. For walls, it can be combined with the **Break** function to enable more precise zone creation.

Draw Segmentation – Specific Element Method

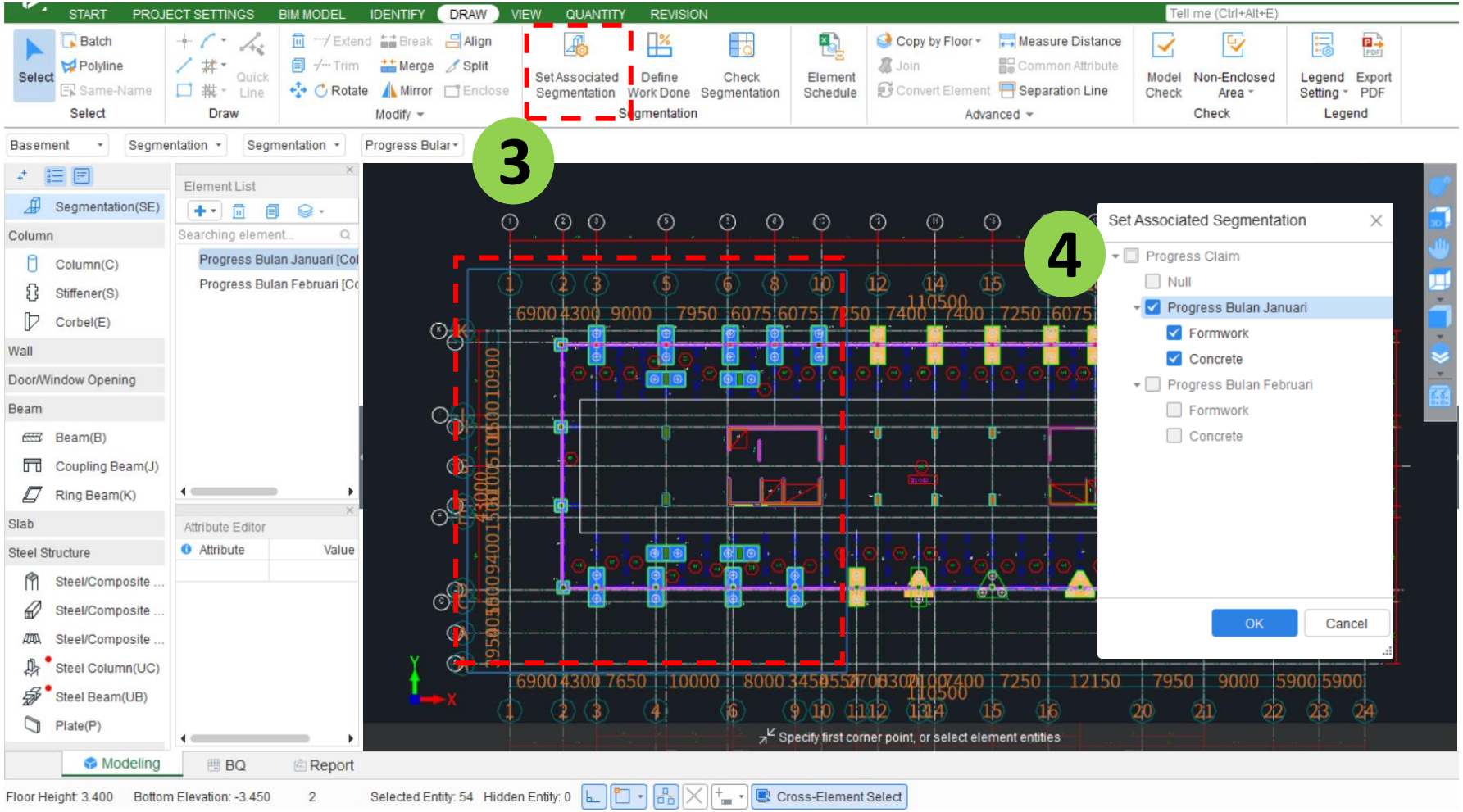
- Step 1: Entity Display Settings→ Tick necessary elements
- Step 2: Turn on Cross-Element Select



Entity Display Settings

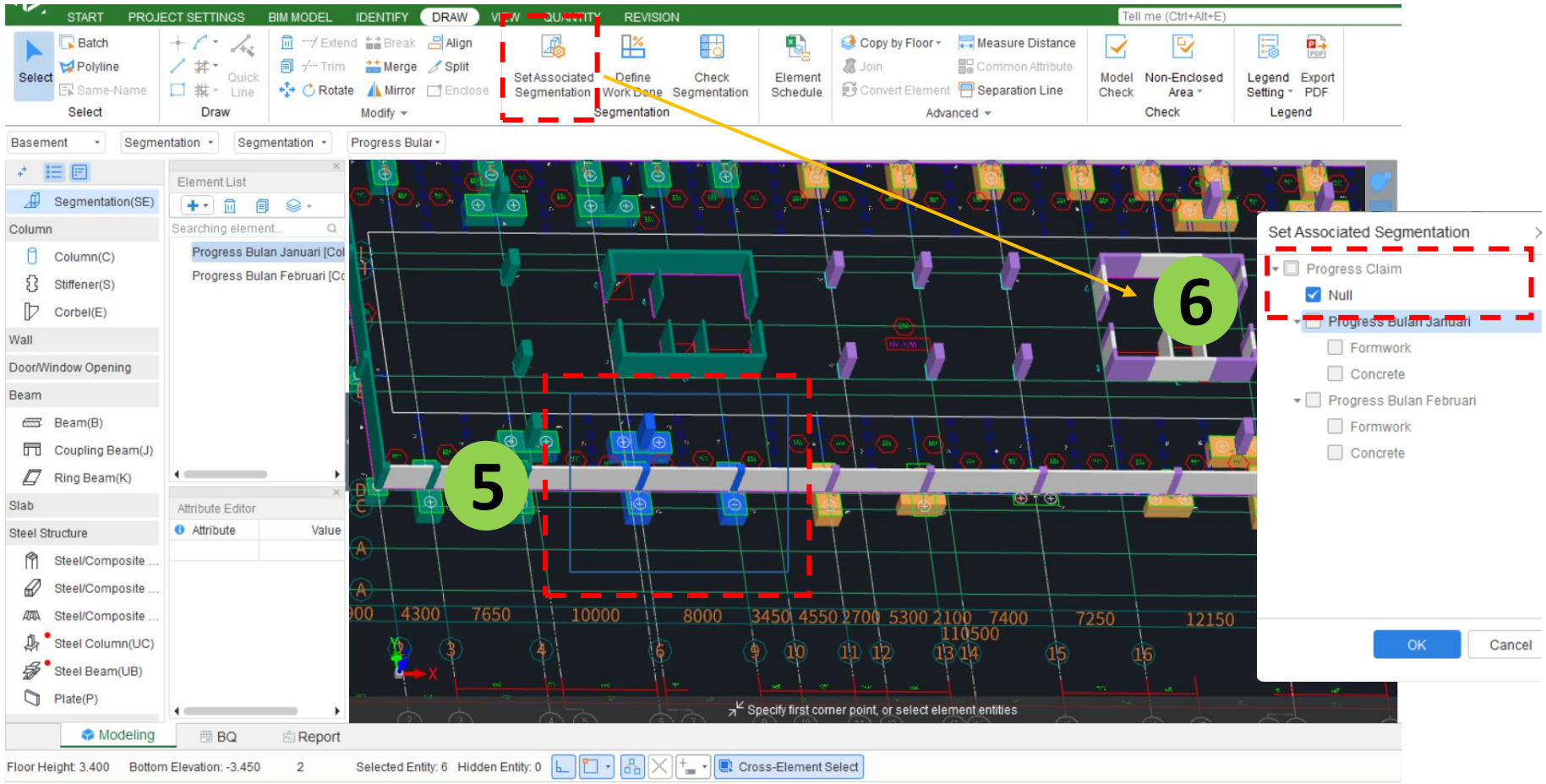
Draw Segmentation – Specific Element Method

- Step 3: Set Associated Segmentation and block the required entities
- Step 4: Choose the desired work progress



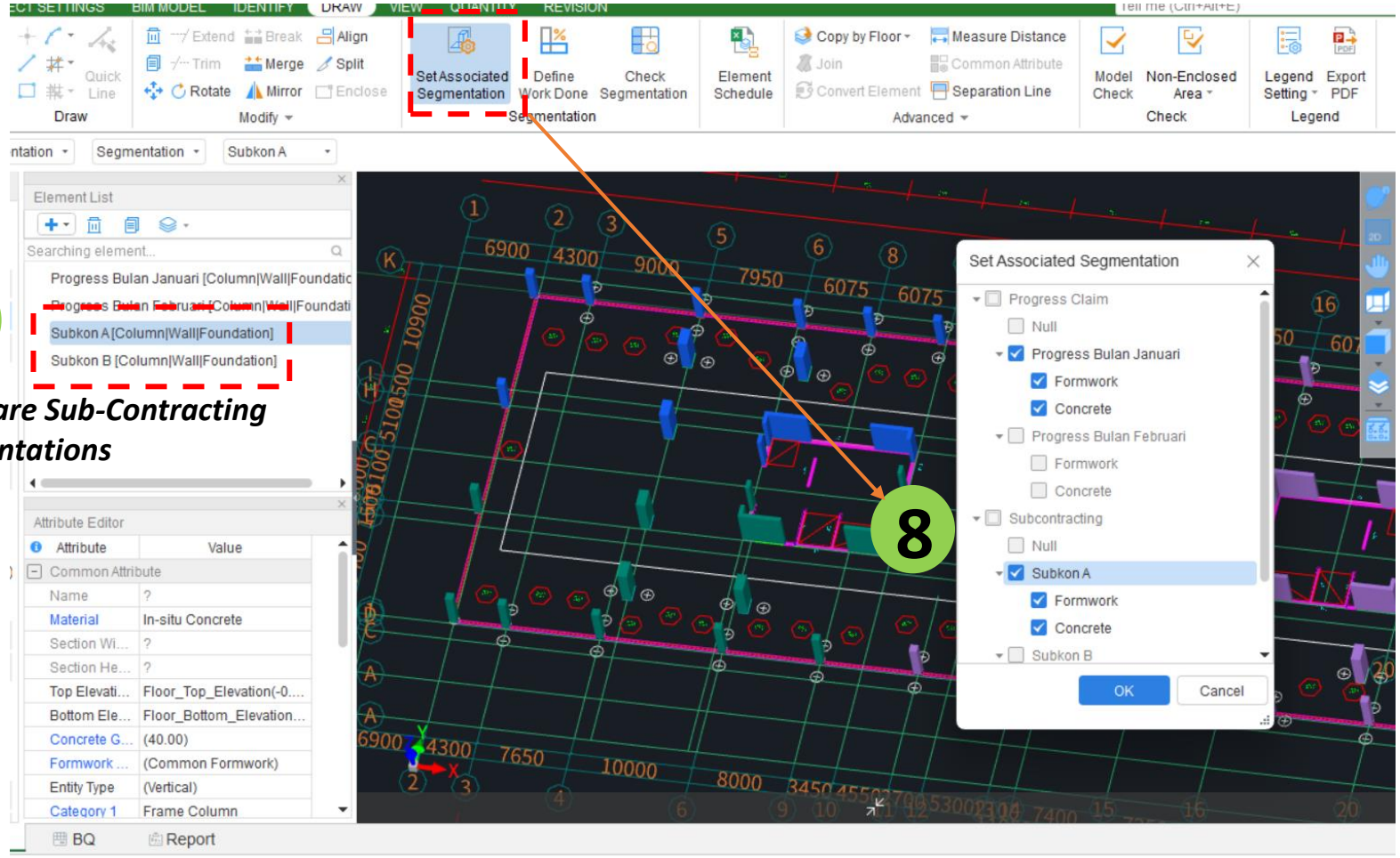
If there are entities that are not included,

- Step 5: Select the target entities
- Step 6: Set Associated Segmentation and choose “Null”



Draw Segmentation – Mix with Other Segmentation

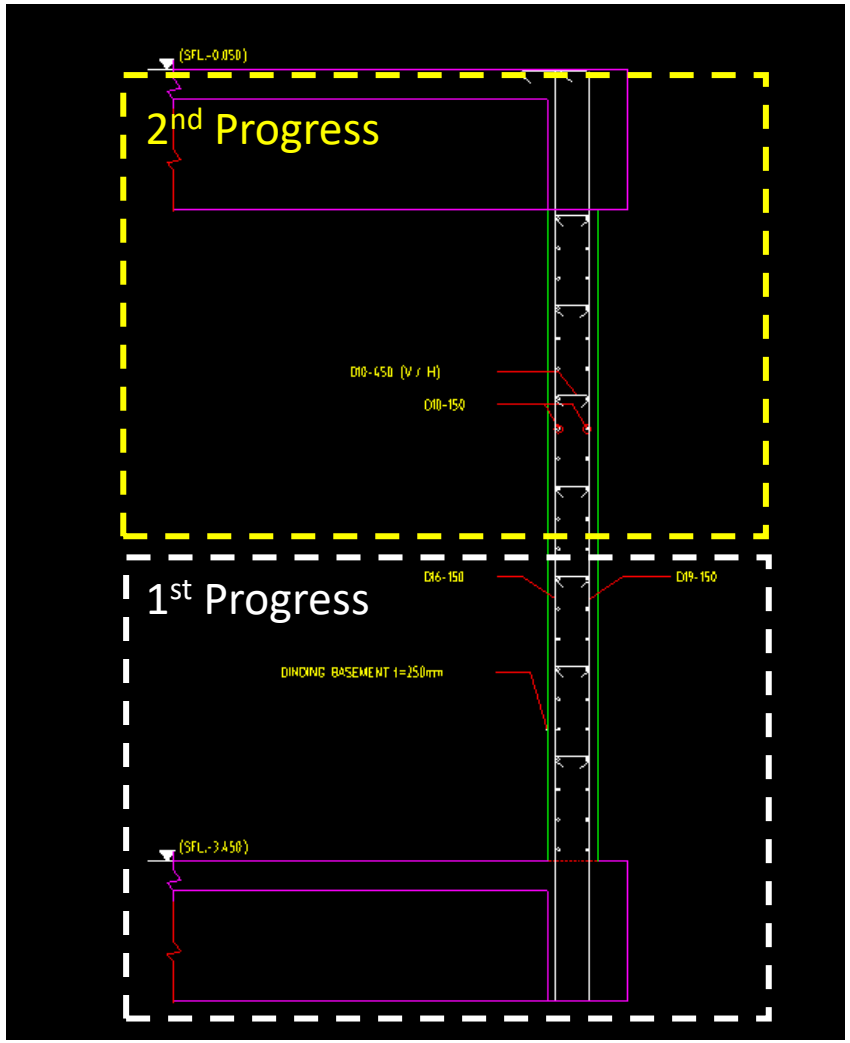
- Step 7: If there are further classifications, you can use additional **but different** segmentation, such as Sub-Contracting, etc.
- Step 8: Set each element's segmentation .



These are Sub-Contracting Segmentations

Draw Segmentation – Define Work Done

Case: Vertical Element Work in Stages



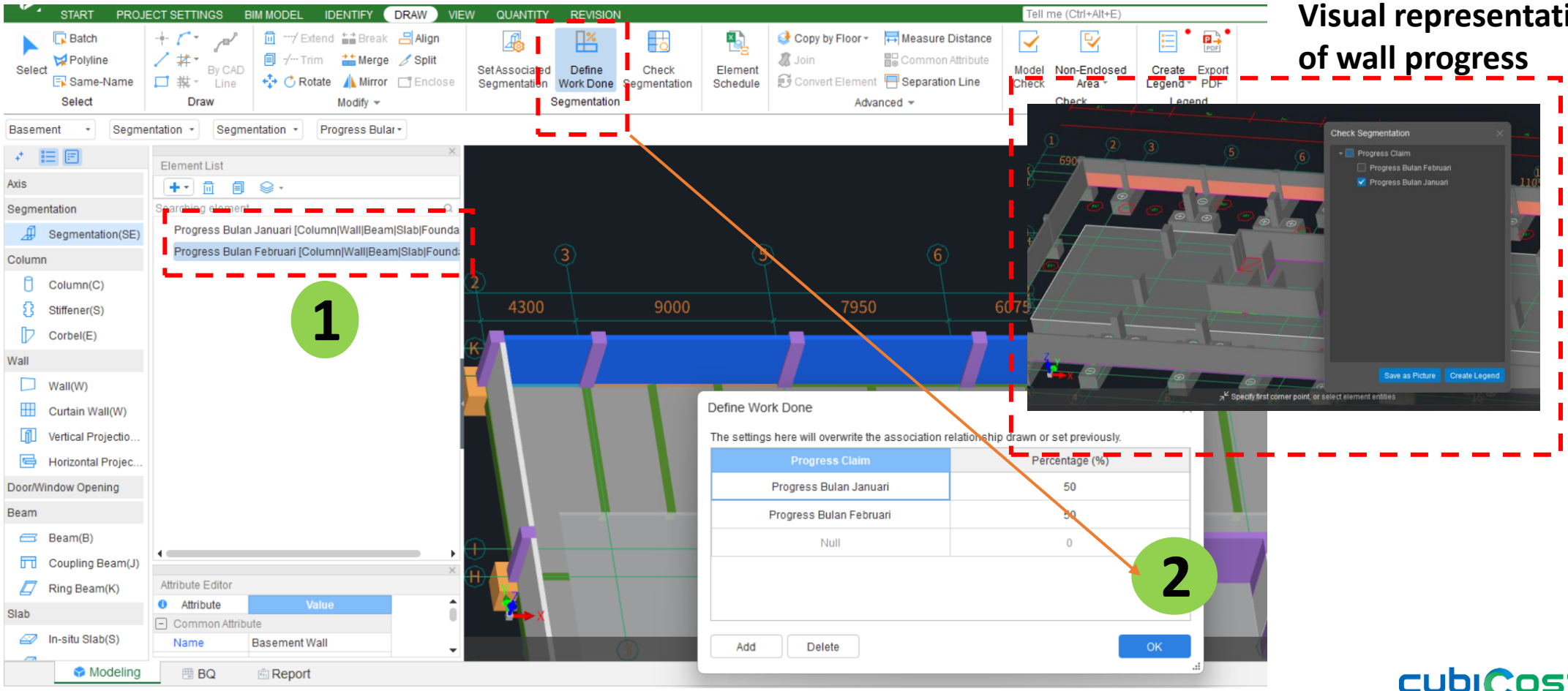
Previously, **Set Associated Segmentation** was used for vertical elements, such as pile caps, columns, and walls.

If these elements are constructed in multiple phases, segmentation must be further refined using **Define Work Done**.

This function allows work progress to be tracked as a percentage (%) over multiple periods.

Draw Segmentation – Define Work Done

- Step 1: Create Progress Claim for several periods
- Step 2: Define Work Done → Set percentage (%) for each period

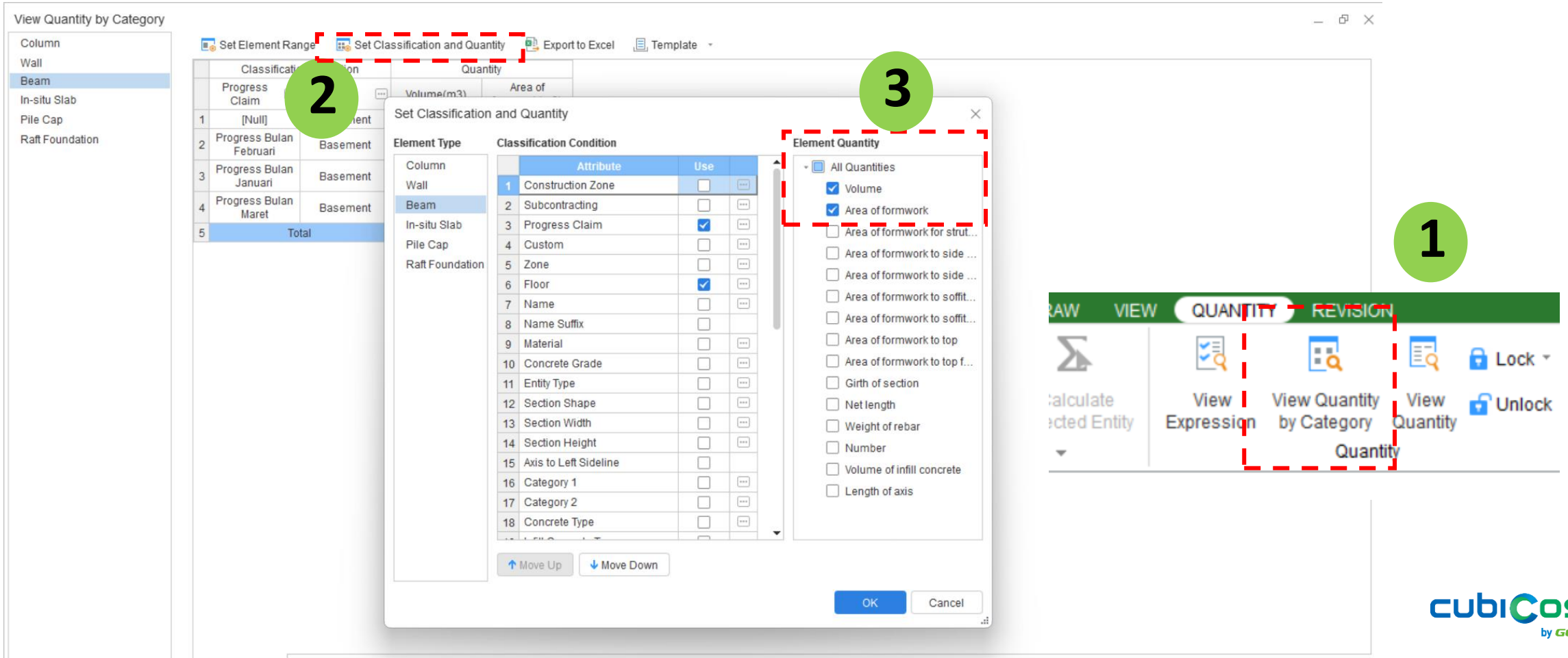


Visual representation of wall progress

Quantity Reporting

Quantity Reporting

- Step 1: After Calculate, go to View Quantity by Category
- Step 2: Set Classification and Quantity → Tick the desired segmentation (ex: Progress Claim).
- Step 3: Element Quantity → Tick the necessary quantities



Quantity Reporting

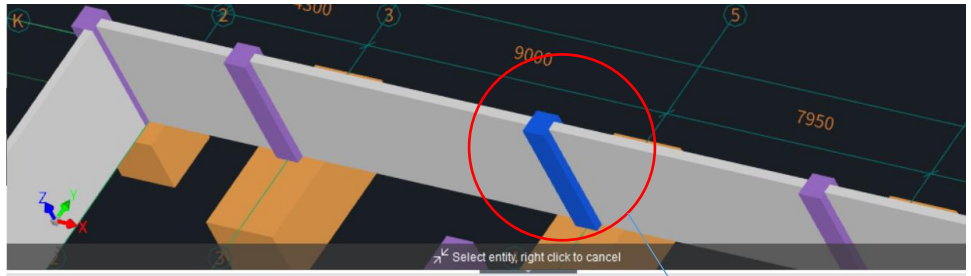
- Volume of concrete and area of formwork are now separated by each progress.
- Total quantities are constant, preventing any overclaimed and underclaimed amounts.
  - *[Null] : Entities outside progress claims*
- View Expression can be used to re-check the calculation, especially if Define Work Done was applied

View Quantity by Category

- Column
- Wall
- Beam
- In-situ Slab
- Pile Cap
- Raft Foundation

Set Element Range | Set Classification and Quantity | Export to Excel | Temp

	Classification Condition				
	Progress Claim	Floor	Name	Volume(m3)	Area of formwork(m2)
1	[Null]	Basement	K1	23.670	92.040
2			K2	7.872	30.176
3			K2A	15.744	60.352
4			K3	27.294	135.664
5			WC1	20.103	114.932
6			WC2	3.692	25.763
7	Progress Bulan Januari	Basement	K1	23.670	91.860
8			K3	18.675	92.826
9			WC1	20.103	114.932
10			WC2	3.693	25.744
11	Total			164.514	784.289



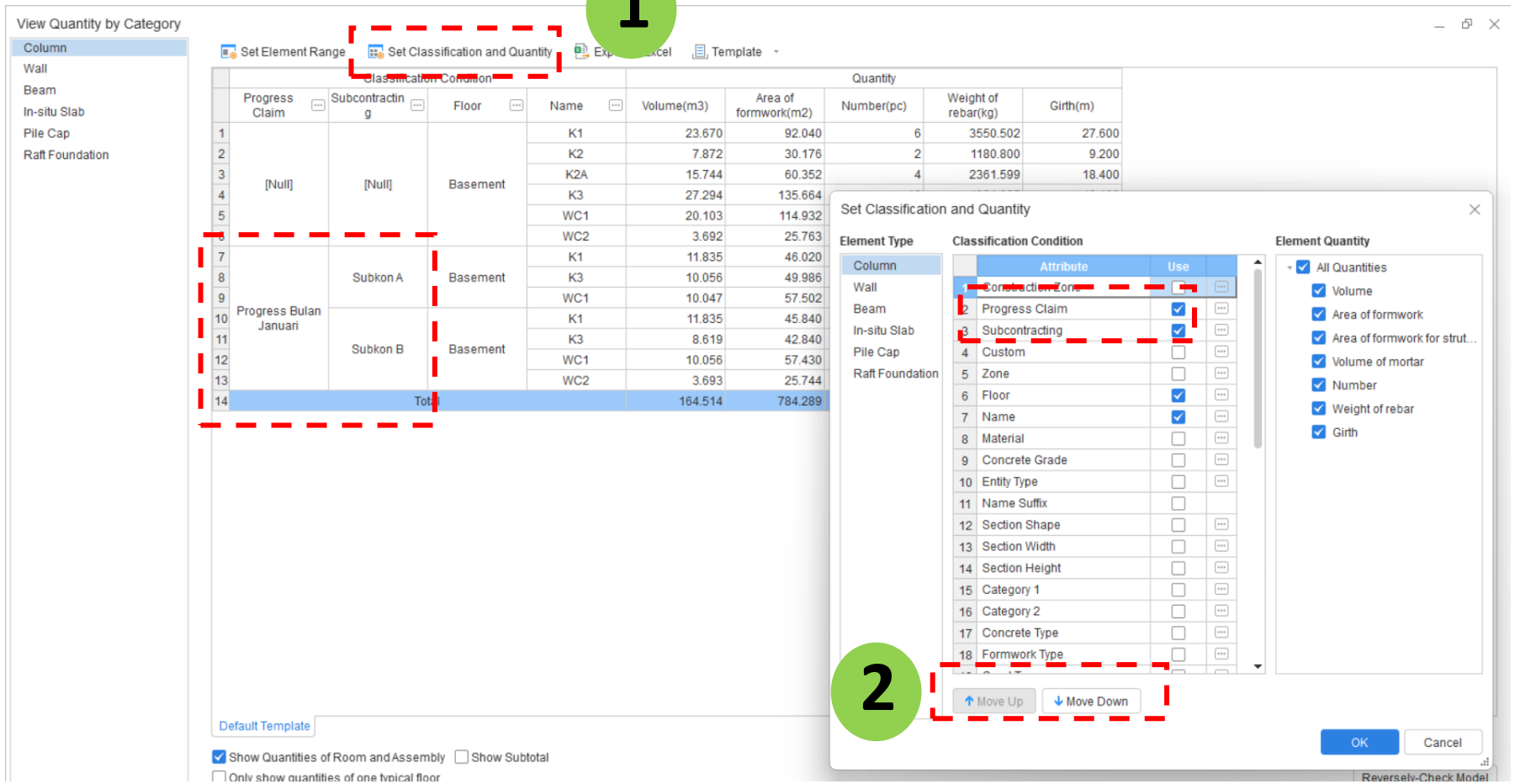
View Element Entity Quantity Expression

Element Type: | Element Name: K3 | Quantity Name: [All] | 3D Deduction | 3D Measu

	Quantity Name	Quantity Expression	Quantity	Unit	Segmentation	Count Tag
1	Volume	0.650<Length>*0.650<Width>*3.400<Height>	1.437	m3	Original	☑
2	Area of formwork	8.840<Original area of formwork to column>-1.700<Deduct wall>	7.140	m2	Original	☑
3	Number		1	pc	Original	☑
4	Weight of rebar	1.437<Volume>*150.000<Steel ratio>	215.475	kg	Original	☑
5	Girth	(0.650<Length>+0.650<Width>)*2	2.600	m	Original	☑
6	Volume	50%*1.437<Original | Volume>	0.718	m3	PC|Progress Bulan Januari	
7	Area of formwork	50%*7.140<Original | Area of formwork>	3.570	m2	PC|Progress Bulan Januari	

Quantity Reporting for Mixture of Segmentations

- Step 1: Set Classification and Quantity → Tick the desired segmentations (ex: Progress Claim & Sub-Contracting).
- Step 2: Use Move Down or Move Up to adjust the filter hierarchy

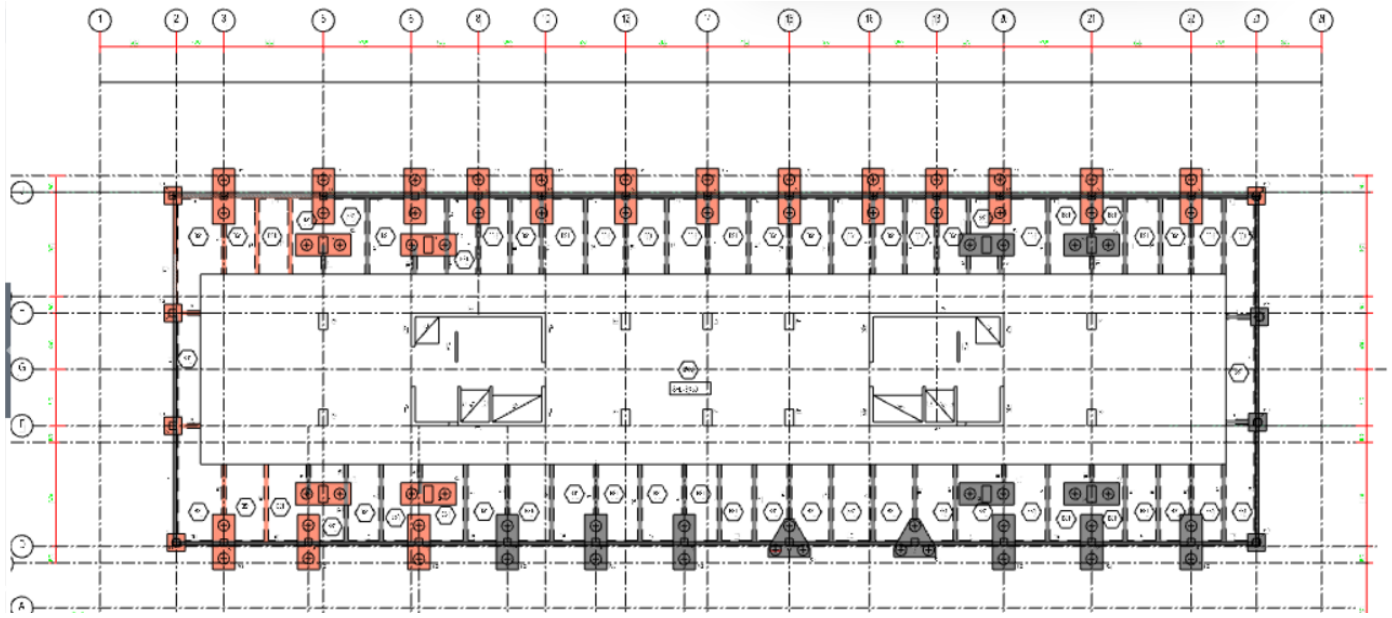


Check Segmentation

Case: Reporting Work Progress

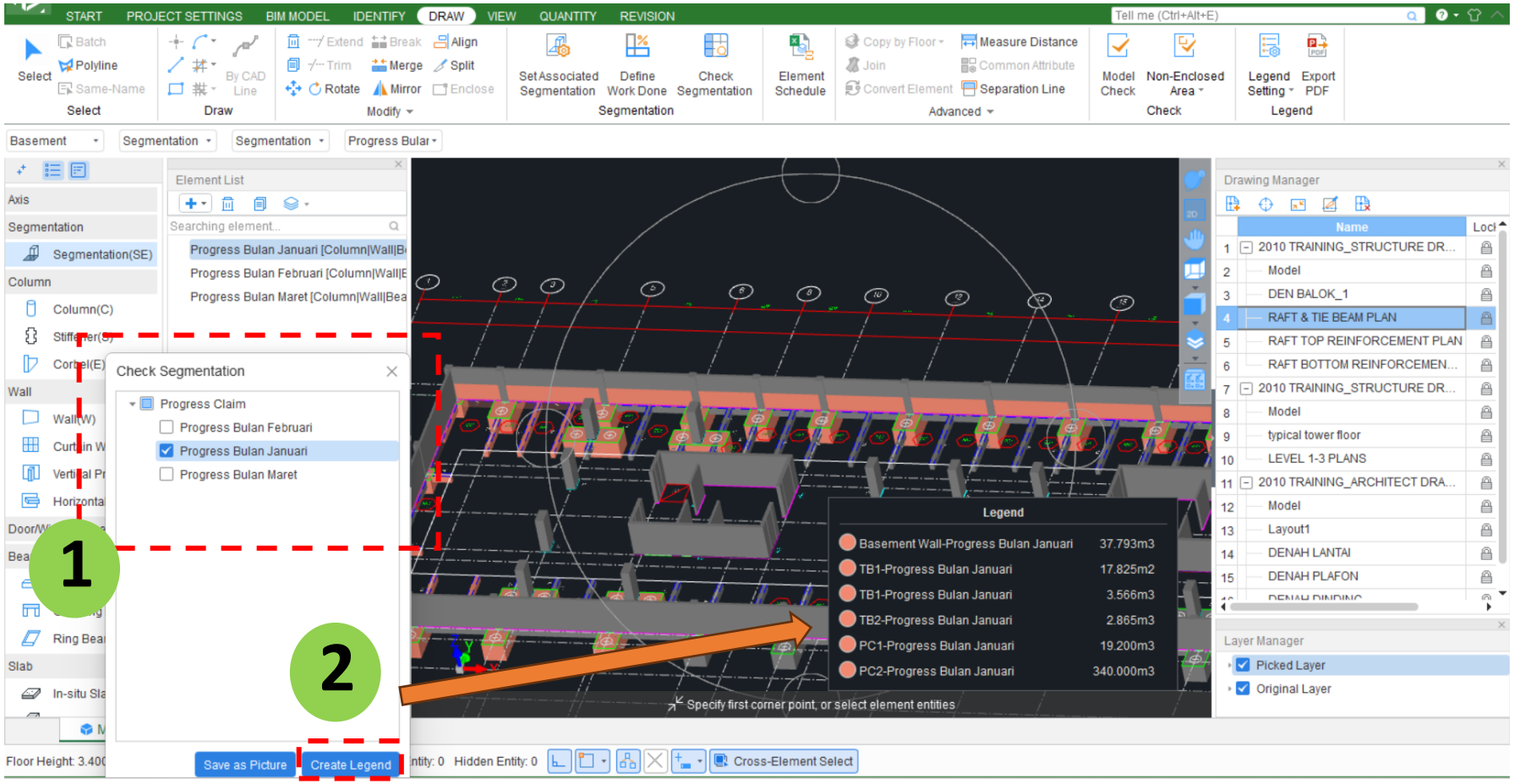
In general, work progress is reported through highlighted drawings. Colored objects indicate completed work, while greyed-out objects represent tasks that have not yet started.

In **Cubicost TAS C-VI**, segmentation zones drawn on the model can be distinguished from excluded areas using **Check Segmentation**. Additionally, the segmentation can be exported as a PDF along with detailed quantity information.



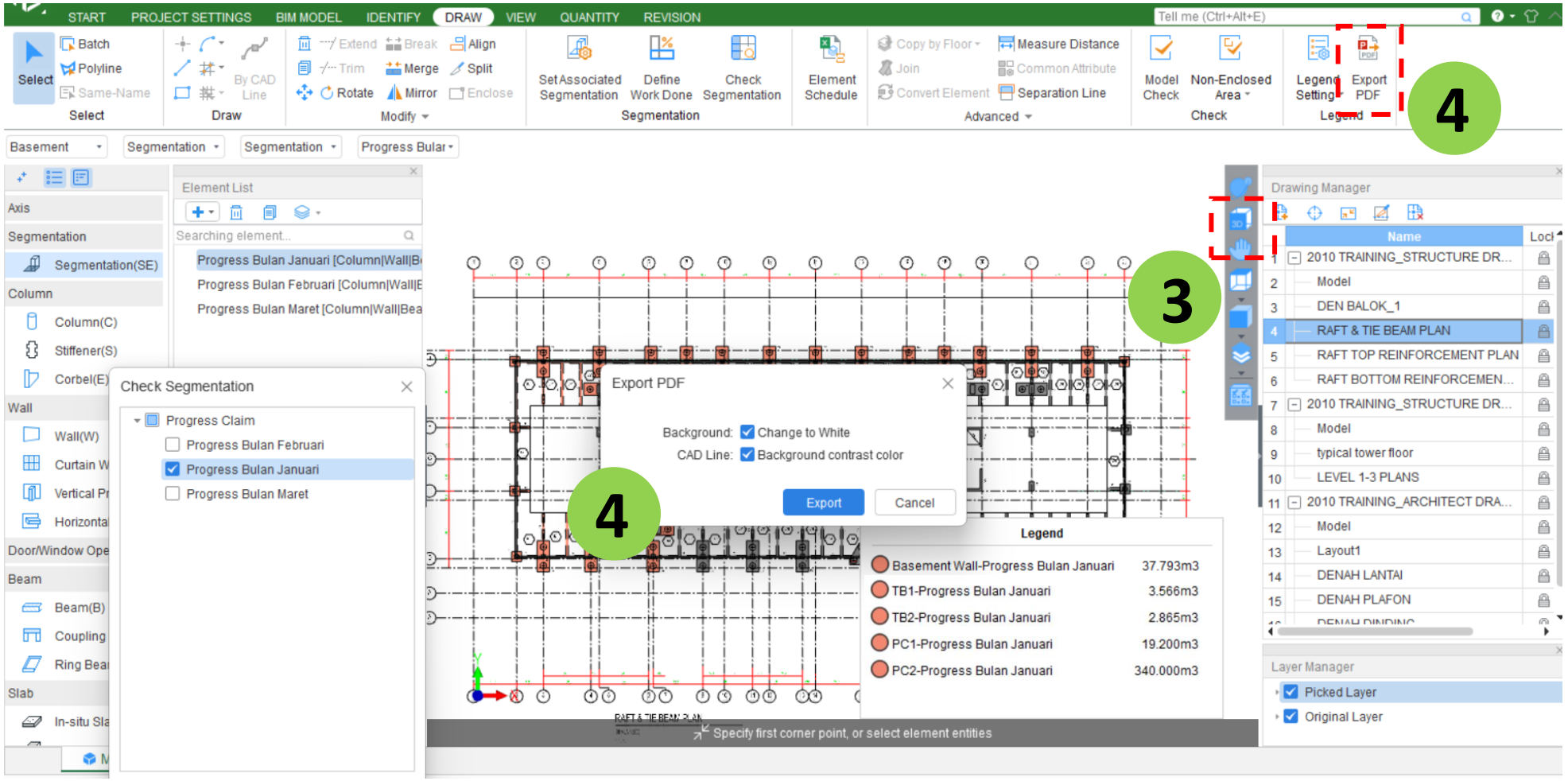
Check Segmentation

- Step 1: Check Segmentation→ Choose the segmentation name
- Step 2: Create Legend to show the quantities (optional). Make sure to display the drawing to give a better view



Check Segmentation

- Step 3: Go to 2D Plan View
- Step 4: Export PDF → Change to White & Background Contrast Color



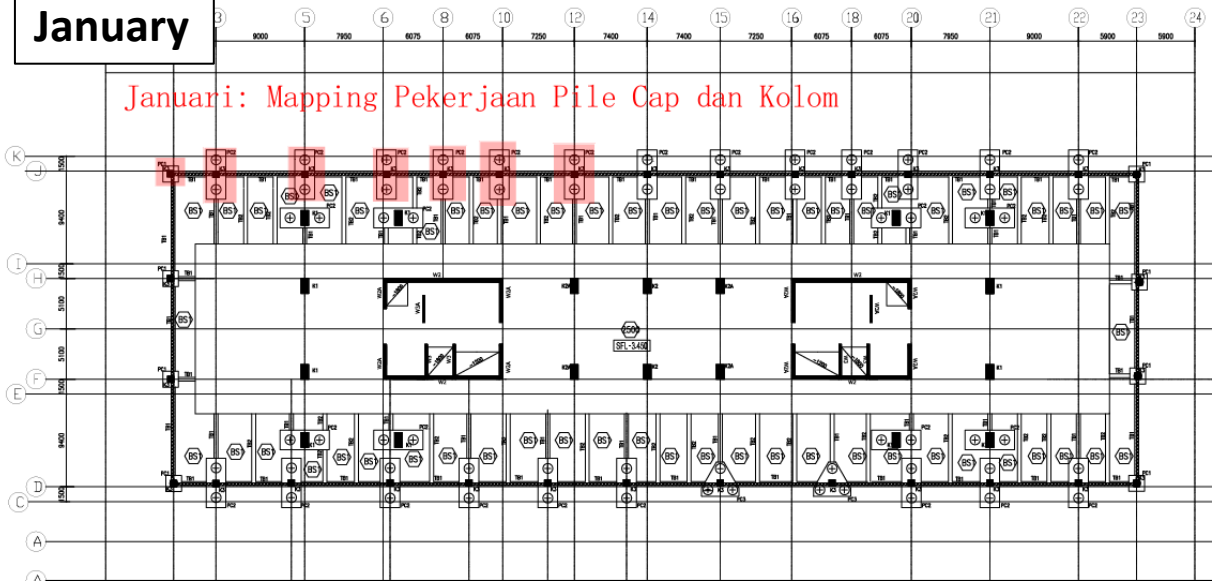
CASE 1:
PROGRESS CLAIM

Progress Claim of Foundation, Column, and Wall Basement

Several works have been completed as follows,

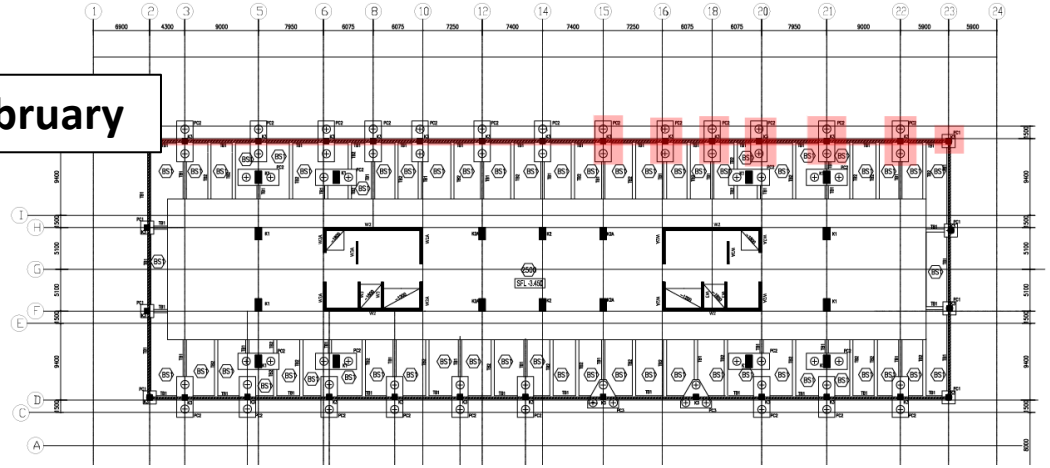
1. 8 Pile Caps and Columns → January 2025
2. Wall (2 m height) → February 2025
3. 7 Pile Caps and Columns → February 2025
4. Wall (remaining height) → March 2025
5. 4 Pile Caps → March 2025

January



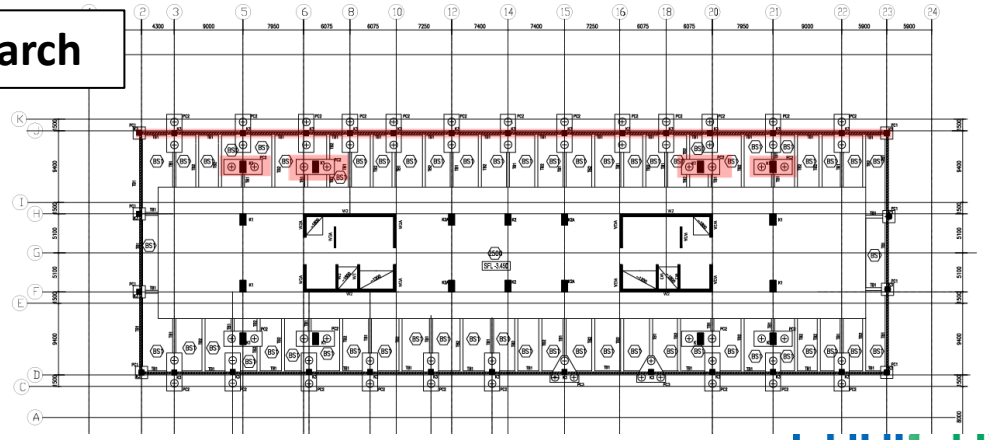
Februari: Mapping Pekerjaan Dinding (sampai SL -1.45)
Mapping Pekerjaan Pile Cap dan Kolom

February



Maret: Mapping Pekerjaan Dinding (SL -1.45 sampai SL -0.05)
Mapping Pekerjaan Pile Cap

March



Progress Claim of Foundation, Column, and Wall Basement

- Step 1: Create 3 types of Progress Claims
- Step 2: Use Progress Claim → Set Associated Segmentation for Pile Caps, Columns, and Walls
- Step 3: For construction in stages, use Define Work Done