

# FAQ

Cubicost-TAS C

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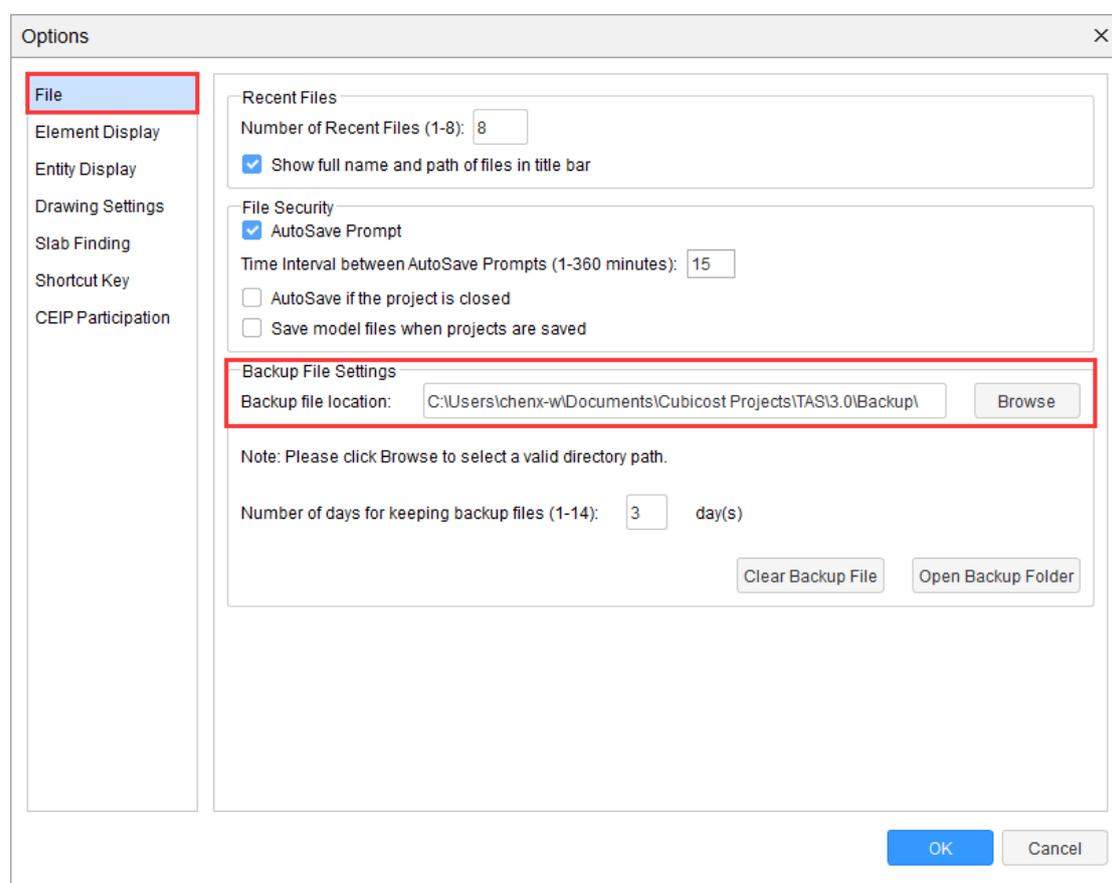
## General

# Where are backup files stored? How to use backup files?

**Question:** I forgot to save my project. How can I find the backup file?

**Solution:**

In the Options window, on the File tab, you can see the default save path for backup files. Follow that path to find your backup project. You can also click Browse to change the save path for backup files to a location easy for you to find.



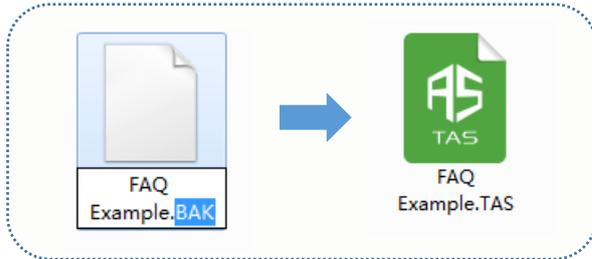
## Related Question:

Do not know how to use backup files?

**Question:** The backup file found is not a TAS project file, thus I cannot open it.

### Solution:

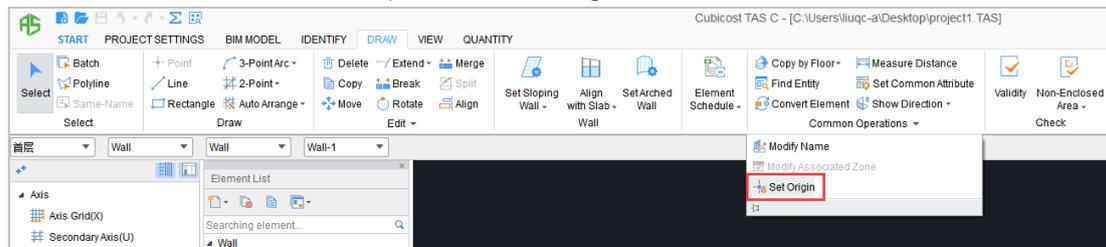
Changing the file extension from ".BAK" to ".TAS" helps you convert a backup file to a TAS project file. Double-click to open it.



# Why I cannot find some functions existing in old TAS in TAS C?

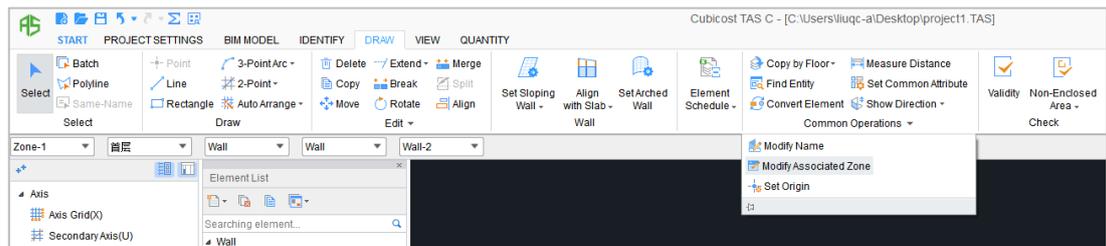
## 1. Set Origin

Location: Click DRAW > Common Operations > Set Origin.



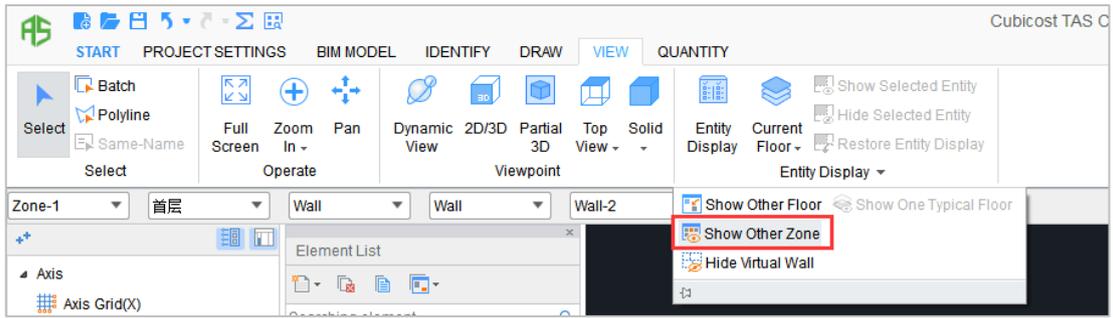
## 2. Modify Associated Zone

Location: Click DRAW > Common Operations > Modify Associated Zone.



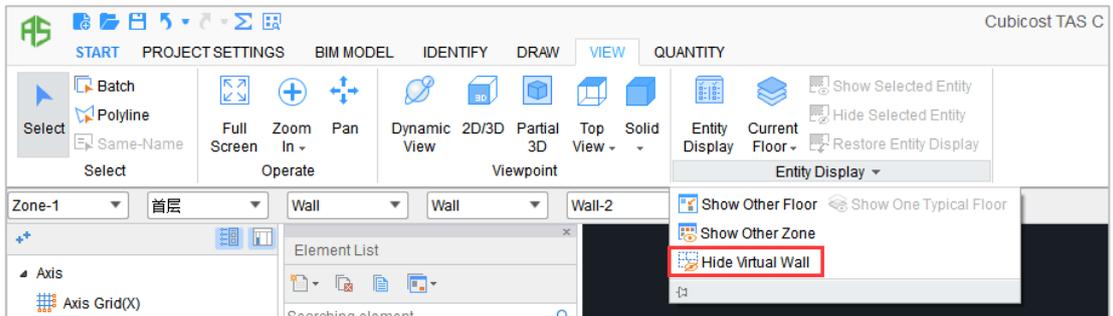
### 3. Show Other Zone

Location: Click VIEW > Entity Display > Show Other Zone.



### 4. Hide Virtual Wall

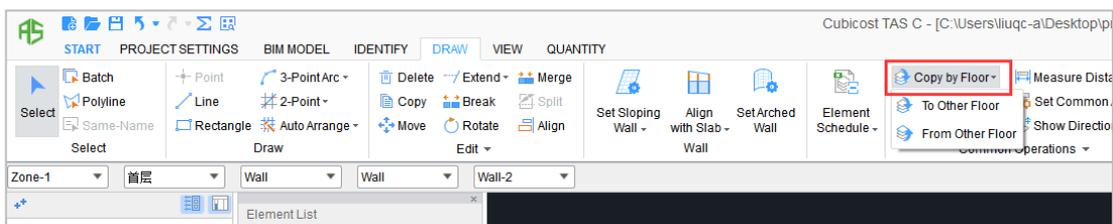
Location: Click VIEW > Entity Display > Hide Virtual Wall.



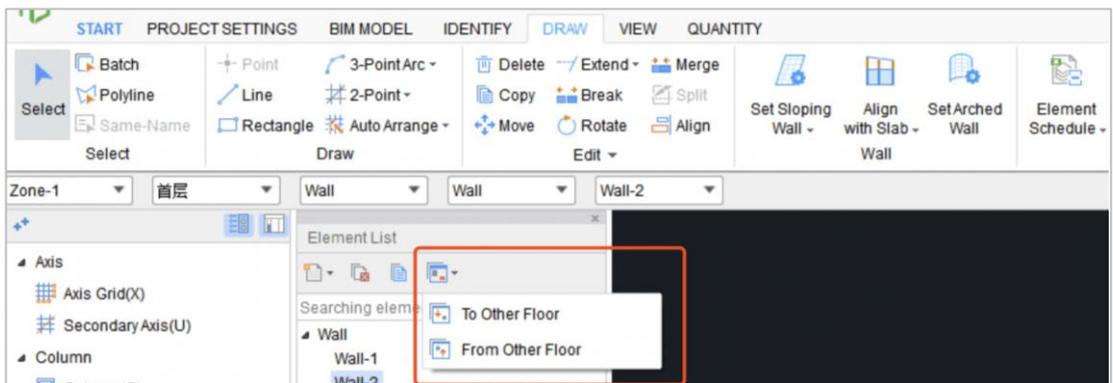
### 5. Copy from/to Other Floor

Location:

a) Copy Entity: Click DRAW > Common Operations > Copy by Floor.



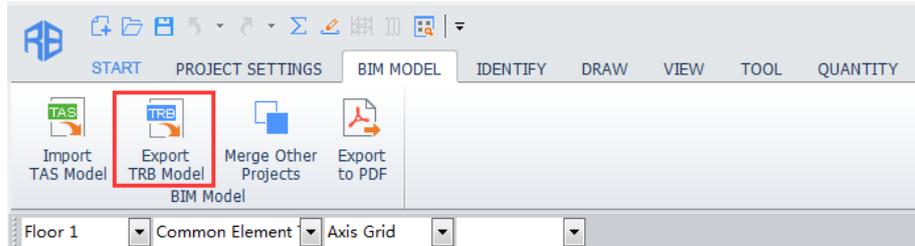
b) Copy Element: Element List > Copy by Floor.



## 6. Where are Pick Element, Archive/Load Element, Delete Same-Location Entity?

Solution: In TAS C (6800 version), these commands are not available. We will add them later. Stay tuned.

## Why I cannot use TAS to open TRB files?

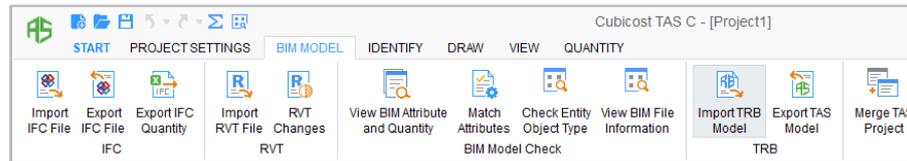


**Question:** Why I cannot open files saved in TRB with TAS?

### Answer:

With new version TAS (6800 and later) and new version TRB (3788 and later), you cannot open each other's project files directly. Instead, you need to export the files as model files first.

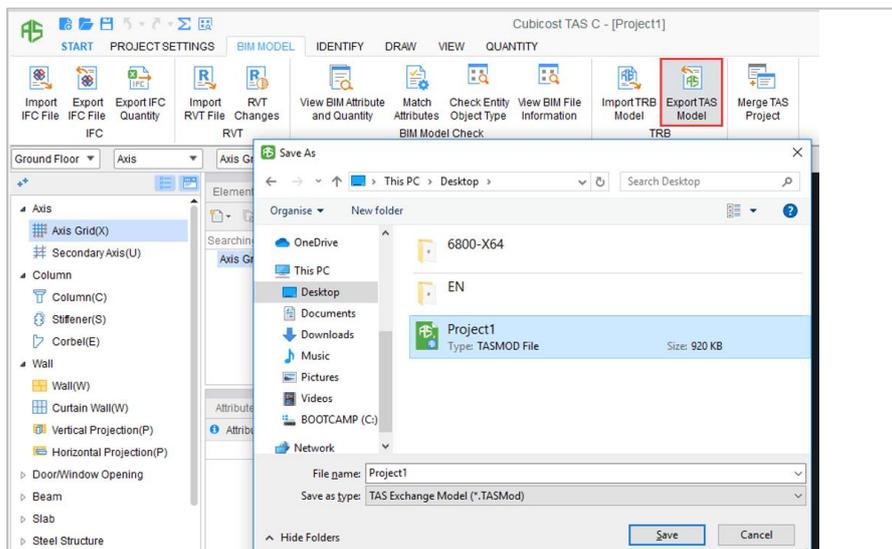
**To open TRB projects with TAS, please follow the ways below:**



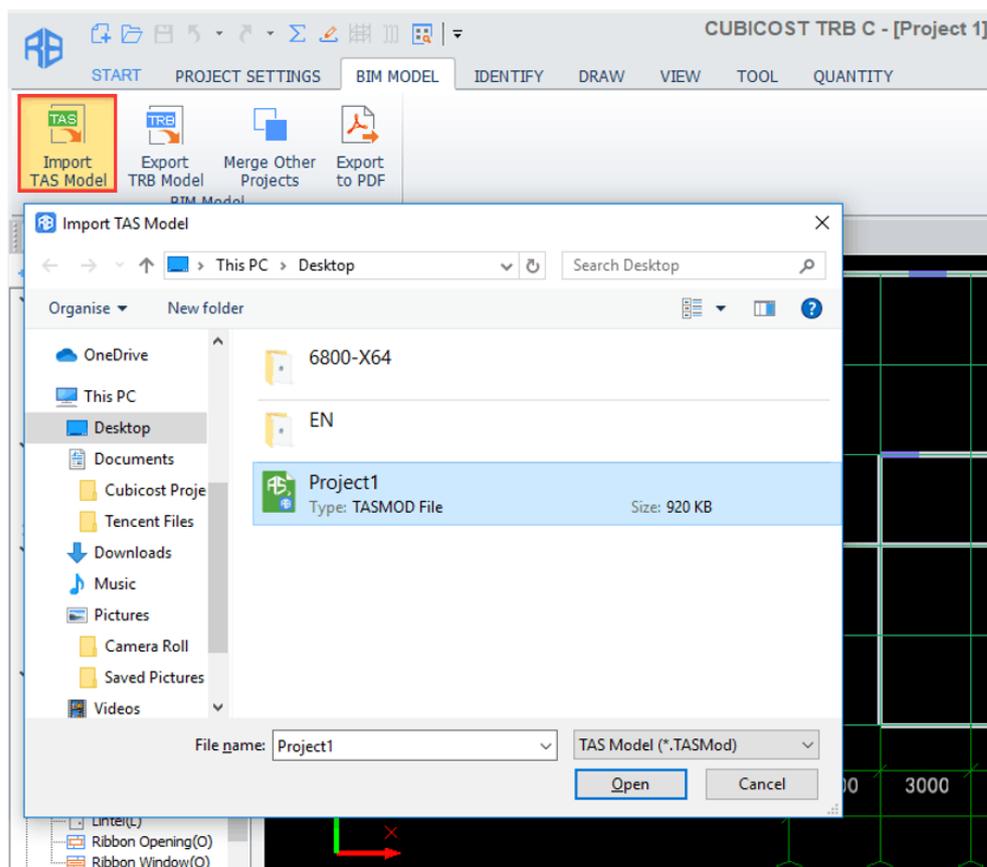
- 1) In TRB, export the TRB model.
- 2) In TAS, Import the TRB Model.

**Likewise, you can open TAS projects with TRB:**

- 1) In TAS, export the TAS model.



2) InTRB, import the TAS model.



## Why I cannot merge two TAS C projects?

**Question:** Why I cannot merge two TAS C projects? Multiple persons work together to make one project. How can I ensure that the different parts of the project can be merged into one project easily?

### **Solution:**

Two TAS C projects can be merged only when they are consistent in terms of version and measurement rules, and the floor heights of matching zone are consistent.

If you are doing your work collaboratively, please follow the steps below:

One QS creates a project, and according to the drawing info, set zones, floors accurately, draw axis grids, and then save the project.

Allocate the project containing zones, floors and axis grids to different QSs.

Based on the existing axis grids of the project, each QS completes his/her own work.  
Click Merge TAS Projects to merge the different parts into one project.

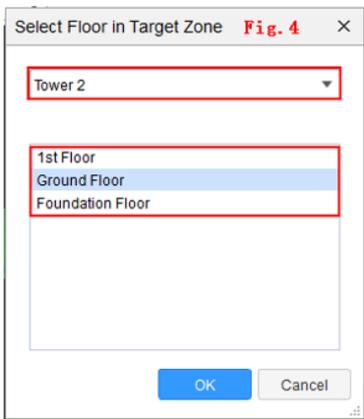
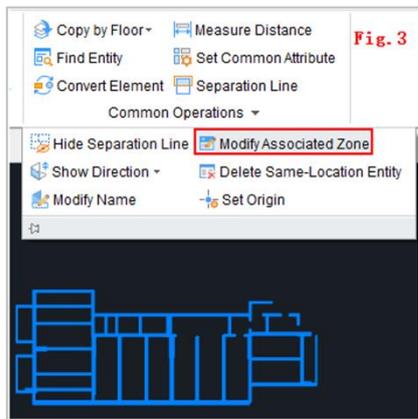
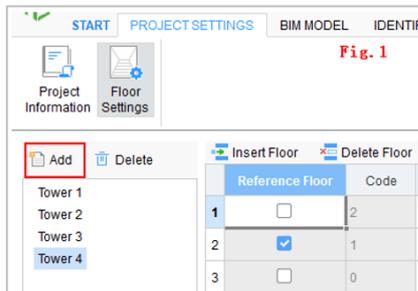
**Related Article:** <https://tas-helpcenter.cubicost.com/hc/en-us/articles/360021251472-Merge-TAS-Project>

# How to move the entities in one zone to another zone?

**Question:** I have already built all models in one zone. It is required to extract quantities by zone. How can I move the models in the current zone to corresponding zones?

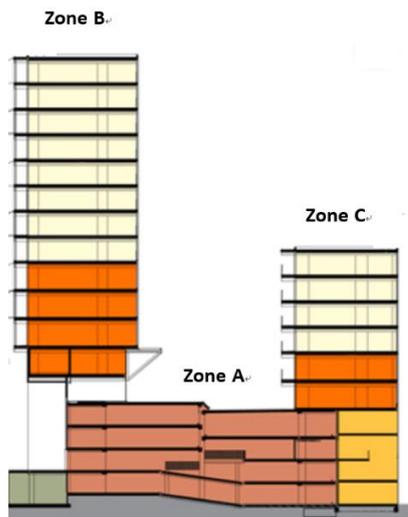
**Solution:**

- 1、 In Project Settings > Floor Settings, click Add to create zones (Fig. 1).
- 2、 At the bottom of the drawing area, enable Cross-Element Select (Fig. 2).
- 3、 Drag-select the entities you want to move to another zone, and then in the ribbon, click Common Operations > Modify Associated Zone (Fig. 3).
- 4、 In Select Floor in Target Zone, select target zone, and click on floor names to select floor.



# How to deal with the parking lot project with split-levels?

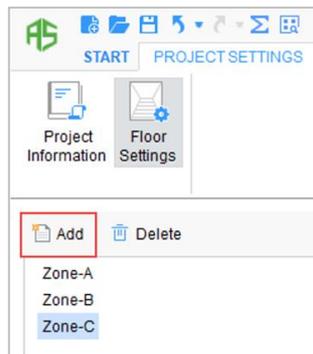
**Question:** As shown in the figure below, Zone A is the parking lot area, Zone B and Zone C and office and residential area respectively. The floor height and bottom elevation of Zone A are different from that of Zone B and Zone C. How can I draw Zone A easily and rapidly?



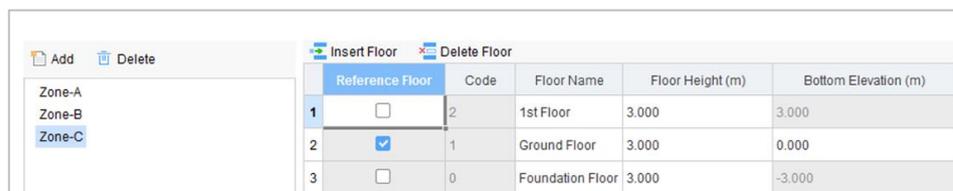
## Solution:

Deal with this problem by creating different zones:

1) On the PROJECT SETTINGS tab, click Floor Settings > Add, to create zones.



2) According to the drawing, enter the bottom elevation and floor height for corresponding zones.



Reference Floor	Code	Floor Name	Floor Height (m)	Bottom Elevation (m)	
1	<input type="checkbox"/>	2	1st Floor	3.000	3.000
2	<input checked="" type="checkbox"/>	1	Ground Floor	3.000	0.000
3	<input type="checkbox"/>	0	Foundation Floor	3.000	-3.000

## Related Articles:

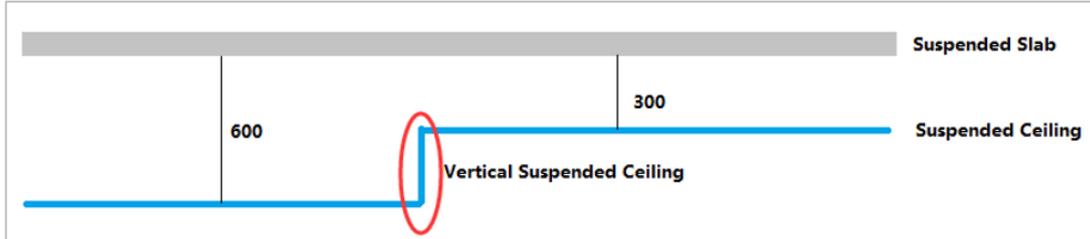
<https://tas-helpcenter.cubicost.com/hc/en-us/articles/360021503371-Modify-Associated-Zone>

<https://tas-helpcenter.cubicost.com/hc/en-us/articles/360021252732-Show-Other-Floor-and-Zone>

## Draw

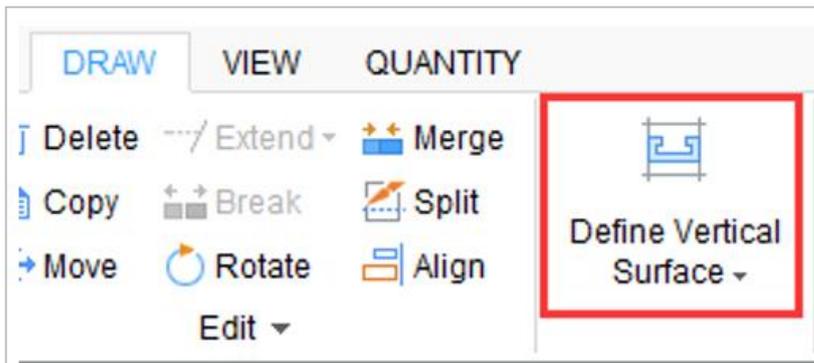
# How to draw suspended ceilings with height differences?

**Question:** There are suspended ceilings with different heights in a room. How should I draw the drop?



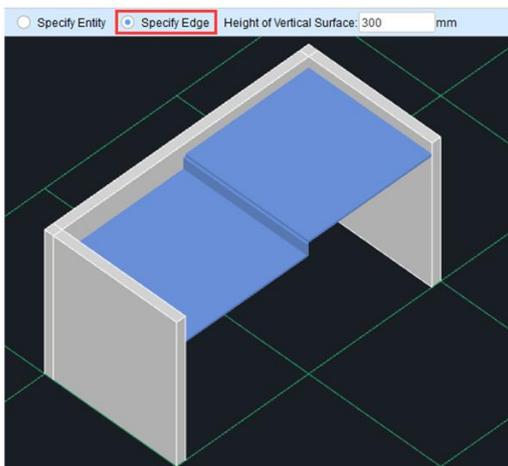
**Solution:**

Click DRAW > Define Vertical Surface, according to business needs, choose to define the vertical surfaces for all edges or a specified edge of the suspended ceiling.



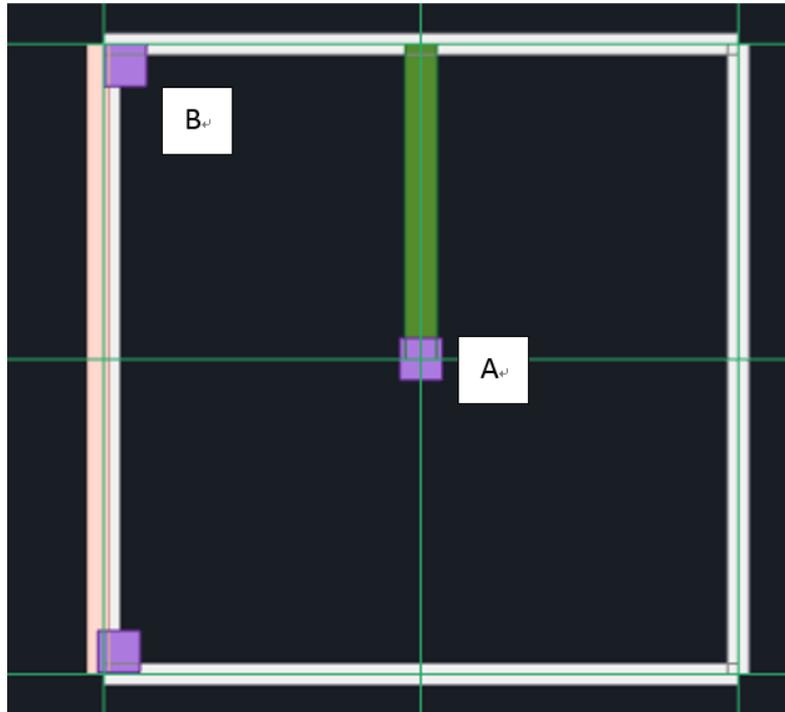
**Take Specify Edge for example:**

To define vertical surface for a specified edge, select Specify Edge, enter the height of the vertical surface in the input box, select the suspended ceiling edge to set vertical surface, and then right-click.



## How to draw finishes to isolated columns?

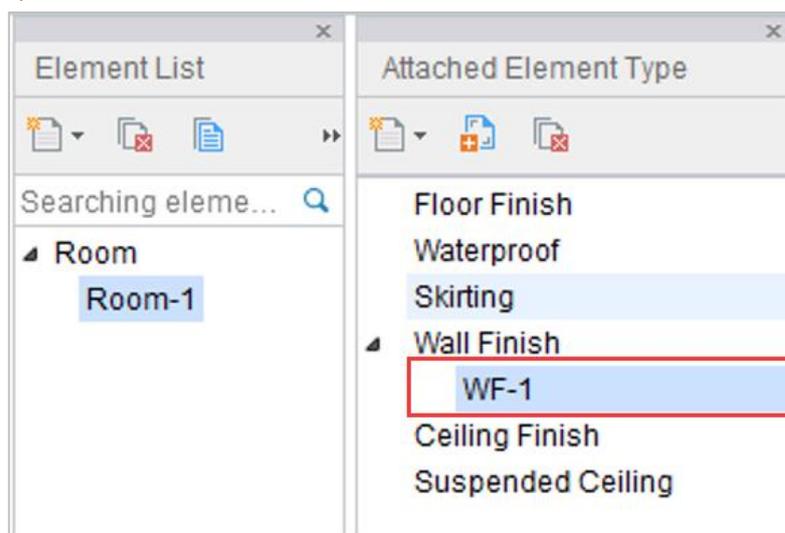
**Question:** For the isolated column A in the figure below, how can I arrange finishes to it?



**Solution:**

Generate finishes by arranging room or arranging wall finish solely.

1) Create a room, and add attached wall finish elements.



2) In an enclosed area, draw a room by point.

3) In the enclosed area, the finishes are arranged to all structural elements, including isolated columns and non-isolated columns.

4) After clicking Summary Calculate, select the wall finish entity at the location A, and view its attributes.

You will find that the Parent Entity Type is Column, and the Parent Entity Sub Type is Isolated Column.

Attribute	Value
End Top Elevation (m)	Column_Top_Elevation(3
Start Bottom Elevation (m)	Column_Bottom_Elevati
End Bottom Elevation (m)	Column_Bottom_Elevati
Material of Attached Surface	(In-situ Concrete)
Parent Entity Type	(Column)
Parent Entity Sub Type	(Isolated Column)
Associated Unit Type	
Associated Room	(Room-1)

Select the wall finish entity at the location B, and view its attributes. You will find that the Parent Entity Type is Column, and the Parent Entity Sub Type is Non-Isolated Column.

End Top Elevation (m)	Column_Top_Elevation(3
Start Bottom Elevation (m)	Column_Bottom_Elevati
End Bottom Elevation (m)	Column_Bottom_Elevati
Material of Attached Surface	(In-situ Concrete)
Parent Entity Type	(Column)
Parent Entity Sub Type	(Non-Isolated Column)
Associated Unit Type	
Associated Room	(Room-1)

5) Separate the quantities of isolated columns and non-isolated columns. Click View Quantity by Category > select Wall Finish > click Set Classification and Quantity > select Parent Entity Type and Parent Entity Sub Type.

View Quantity by Category							
<input type="checkbox"/> Set Element Range <input type="checkbox"/> Set Classification and Quantity <input type="checkbox"/> Export to Excel <input type="checkbox"/> Export to Existing Excel							
Classification Condition				Quantity			
	Floor	Name	Associated Room	Parent Entity Type	Parent Entity Sub Type	Area of Finish to Wall Finish(m2)	Area of Finish to Concrete Surface(m2)
1					Isolated Column	4.800	4.800
2	Ground Floor	WF-1	Room-1	Column	Non-Isolated Column	3.331	3.331
3				Wall	-	66.269	66.269
4	Total					74.400	74.400

Show Quantities of Room and Assembly  
  Show Subtotal  
 Only show quantities of one typical floor

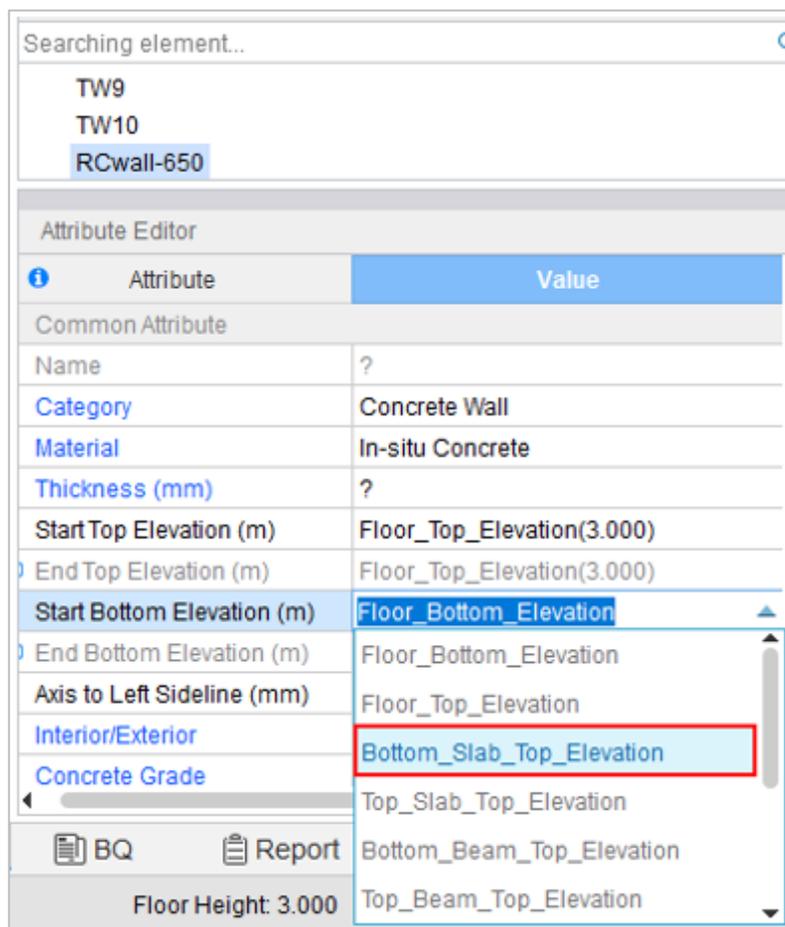
## The column/wall bottoms cannot be aligned with slab.

**Question:** The slabs under columns and walls are on different levels. When using Align with Slab, the bottoms of columns and walls cannot be aligned with slabs. How can I rapidly sync column and wall bottoms with slabs?

**Solution:**

By using Align with Slab, you can only align the tops of columns, walls and beams with slab tops, but cannot align the bottoms of columns and walls to slabs.

To rapidly sync the bottoms of columns and walls with slabs, you can batch select the walls or columns you want to sync with slabs, and then in the Attribute Editor, modify their elevations to Bottom\_Slab\_Top\_Elevation.



**Related article:** <https://tas-helpcenter.cubicost.com/hc/en-us/articles/360021251272-Align-with-Slab-and-Align-with-Roof>

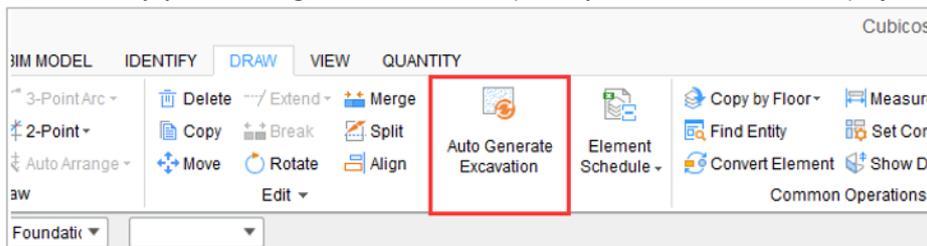
## How to deal with the scenario that there are multiple ground elevations?

**Question:** I can only set one ground elevation now. Can I perform calculation when there are multiple ground elevations?

**Solution:**

Setting multiple ground elevations simultaneously is not supported now. You can deal with this situation in the flowing way:

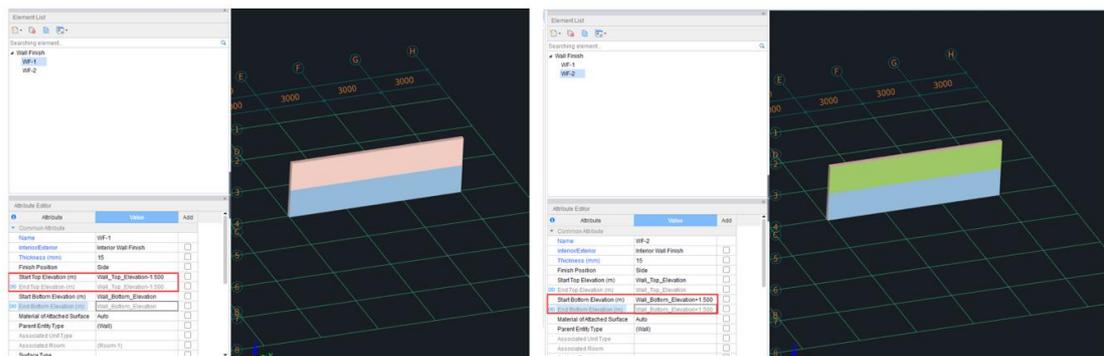
- 1) Set one ground elevation first.
- 2) Select all foundations in the area affected by the set ground elevation.
- 3) Click Auto Generate Excavation, enter parameters, and then generate excavations.
- 4) Go to PROJECT SETTINGS > Project Information, change the value for Ground Elevation.
- 5) Click Auto Generate Excavation again.
- 6) In this way, you can set ground elevations separately for different areas of a project.



## How to draw wall finishes with different elevations?

**Question:** How to generate wall finishes with different elevations?

**Solution:** Adjust the top elevation and bottom elevation separately for wall finishes.



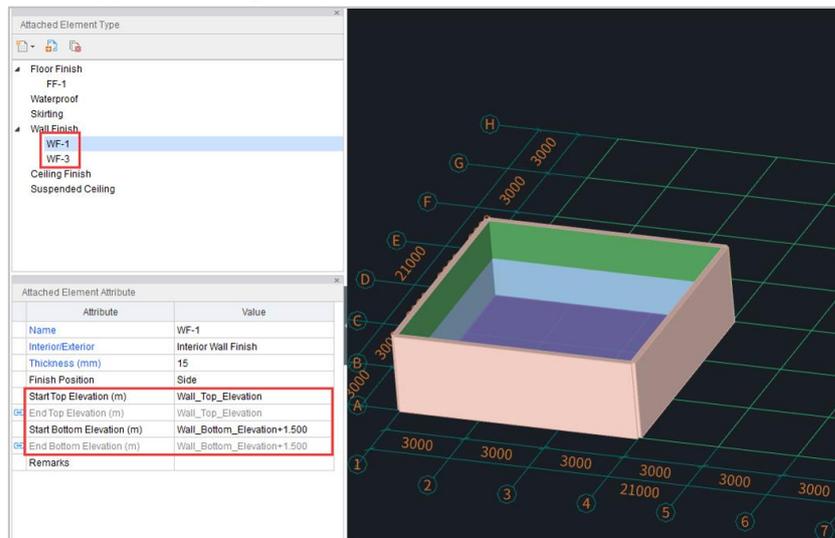
## Related Question:

When drawing room by point, can I draw wall finishes with different elevations?

**Question:** There are multiple wall finishes with different elevations on the same wall. Can I draw them by room?

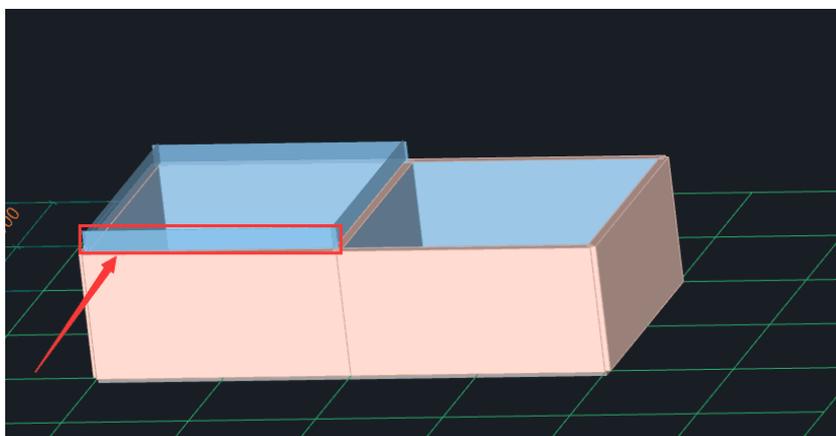
### Solution:

TAS C support attaching multiple finishes to one room, and setting their elevations separately.



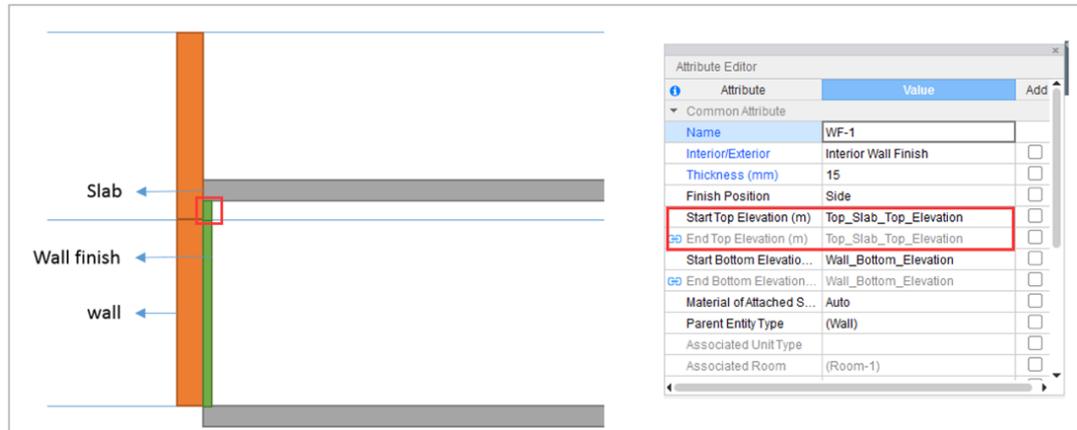
## Why there is an additional segment of wall finish after arranging rooms if there are sunk slabs?

**Question:** When the floor slab within a room is a sunk slab, an additional segment of wall finish will be found after drawing the room by point.



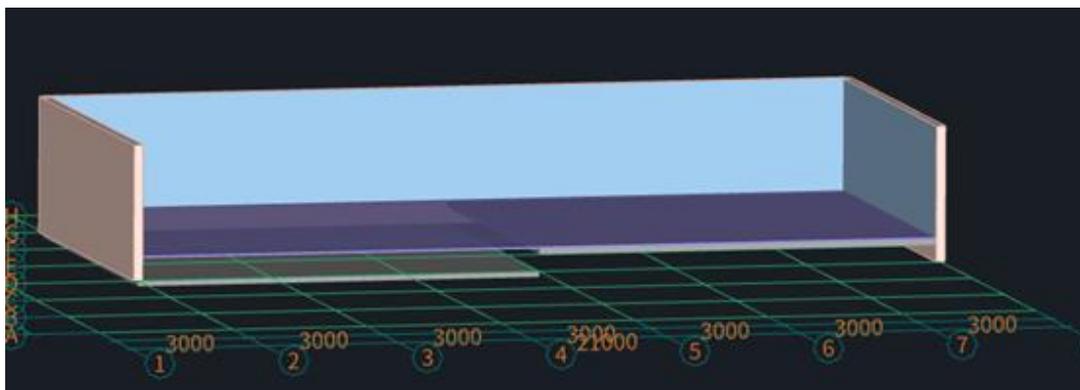
**Solution:**

This problem occurs because, by default, the wall finish elevation is wall top elevation or wall bottom elevation, so when arranging rooms, the wall finishes will be laid to the walls in the current floor completely, and some wall finishes will be laid to the walls falling in the room but belonging to the upper floor. (See the figure below) This outcome doesn't affect the quantity calculation. To modify it, change the option for wall finish top elevation to Top\_Slab\_Top\_Elevation.

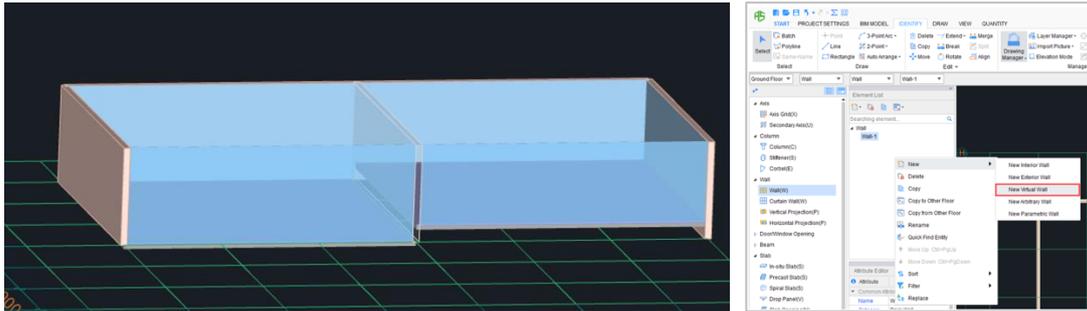
**Related Question:**

Why the finish arrangement is incorrect when there are slabs with different elevations in the room?

**Question:** When there are slabs with different elevations in the room, I find the room fails to find the right slabs for top and bottom when drawing the room by point.

**Solution:**

This problem occurs because currently the room arrangement can only be used for consistent top and bottom elevations. In the same room, it cannot adapt to multiple slabs. To achieve correct arrangement, you need to create and draw virtual walls to separate rooms accordingly. See the case below.



### Related Question:

When there are sunk slabs and beams, how can I draw them?

**Question:** For sunk or raised slabs and beams, what is the drawing process in TAS C?

### Solution:

There are two drawing methods.

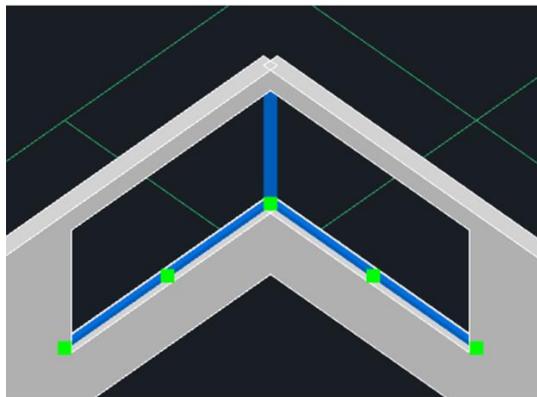
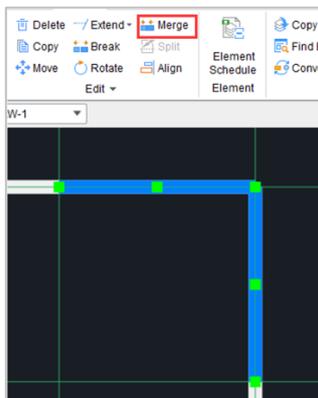
- Draw them as normal beams and slabs, and then modify their elevations in the Attribute Editor.
- Modify elevations in the Attribute Editor first, and then draw them.

## How to draw corner windows?

**Question:** There are corner windows in my project. What element should I use to draw them? How?

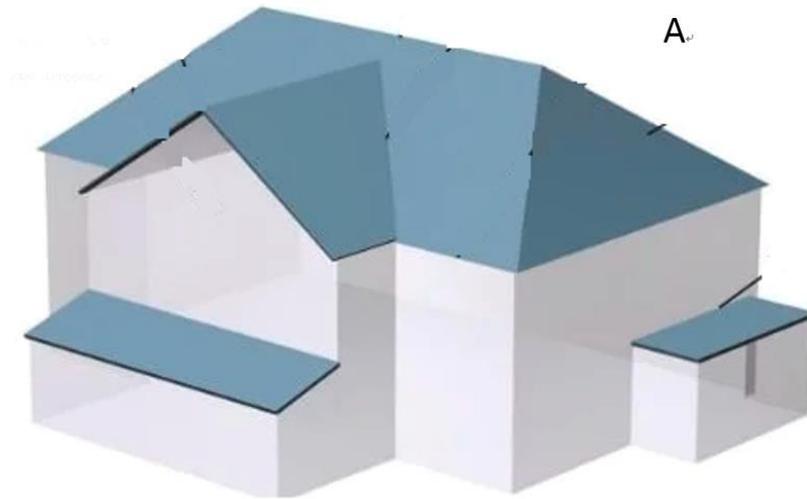
### Solution:

At the location of a L-shaped window, draw two ribbon windows. Select and merge the two ribbon windows, and the L-shaped window will be generated.



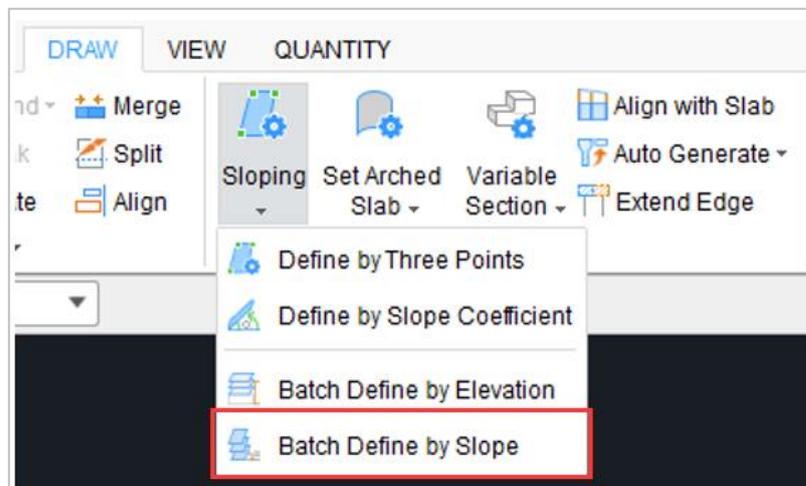
## How to draw sloping roofs?

**Question:** As shown in the figure below, how can I draw the sloping roof in part A?



**Solution:**

- 1) Draw a flat slab along the drawing sideline.
- 2) Click DRAW > Sloping > Batch Define by Slope.



- 3) According to the drawing, enter the info of each edge.

**Related Article:**

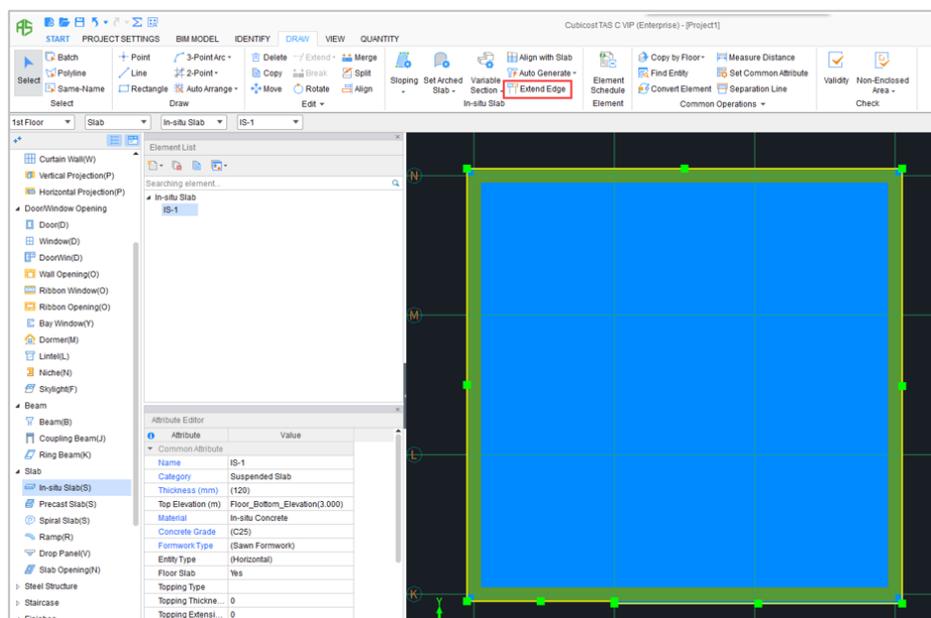
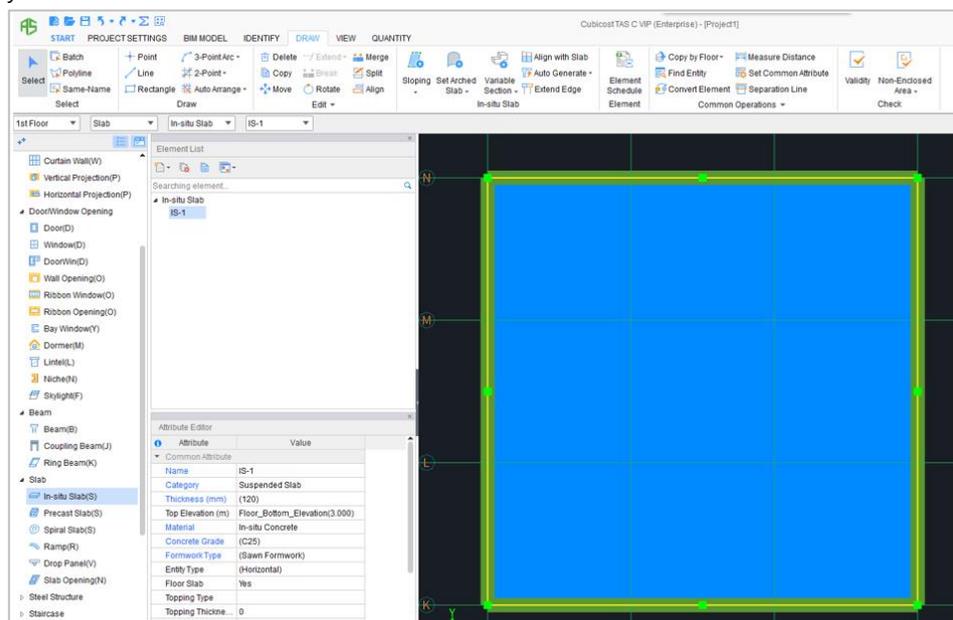
<https://tas-helpcenter.cubicost.com/hc/en-us/articles/360021251872-Sloping>

# The slab extends to the beam centerline. How can I get the quantity of slab extending to the beam edge? (Malaysia, Indonesia)

**Question:** The slabs produced by identification or drawing by point all extend to the centerlines of beams. To get the quantities of slabs extending to the outer sidelines of beams, what should I do?

## **Solution:**

Click Extend Edge to extend slabs to the outer edge of beams automatically, and then get the quantity you want.

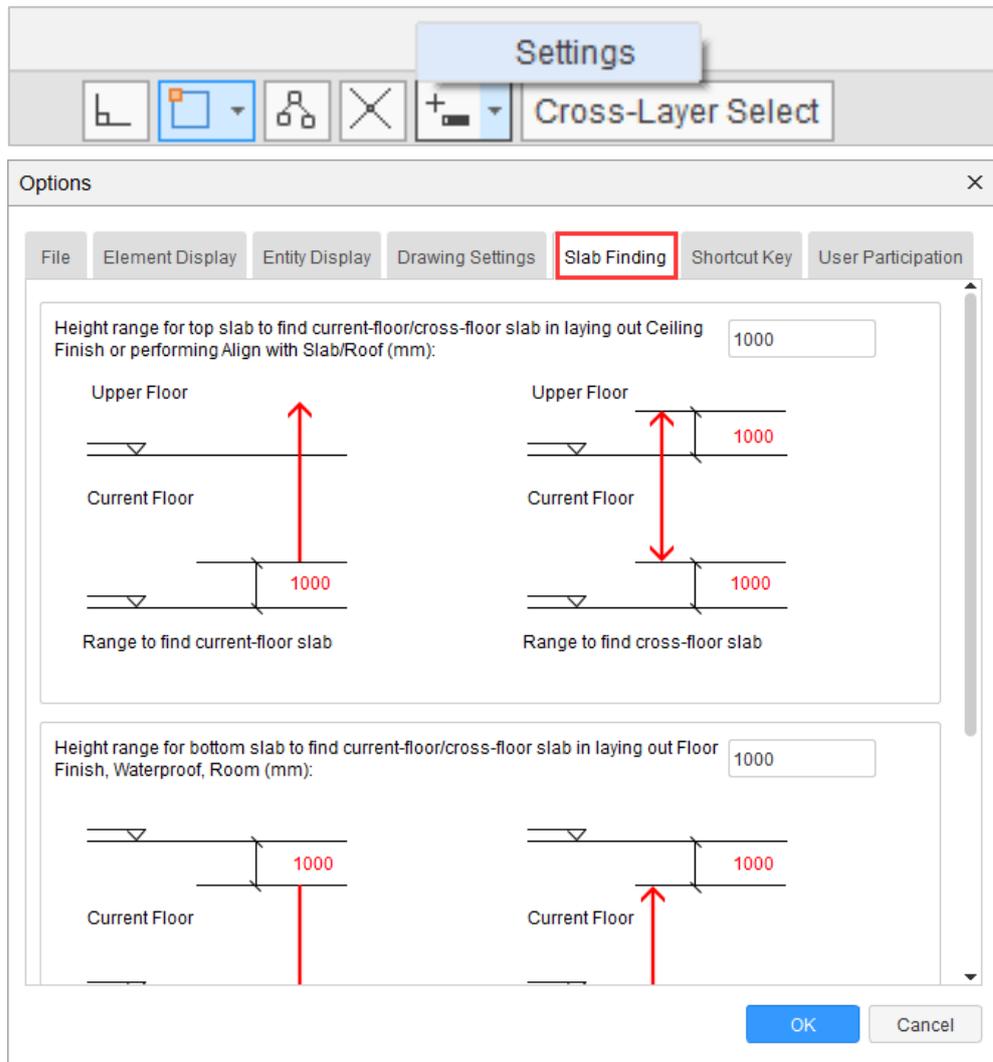


## When performing Align with Slab or drawing suspended ceilings, floor finishes by point, some slabs disappear. Why?

**Question:** When performing Align with Slab or drawing suspended ceilings or floor finishes, I cannot find the slab I want.

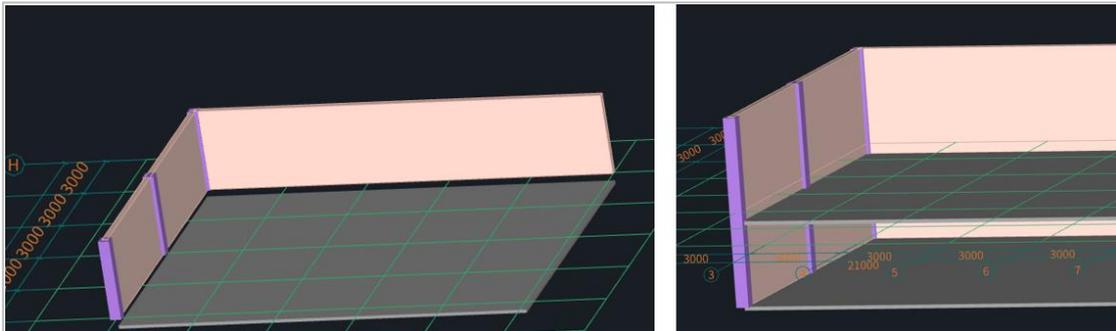
### **Solution:**

This problem occurs because some slabs are filtered out according to the settings in Slab Finding, to facilitate the drawing in the majority scenarios. If the slab you want is filtered out, modify the settings in Slab Finding to display it.



## The sunk slab may fall into the lower floor. Do I need to adjust the elevations of associated walls and columns accordingly?

**Question:** After adjusting the elevation of a sunk slab, I find there are gaps between the slab and wall/column. Do I need to adjust them accordingly?



### **Solution:**

By default, the elevations of wall and column are floor bottom elevation and floor top elevation respectively. When there is a sunk slab, if viewing the model of one floor, the gaps are visible. But there are walls and columns in the lower floor, so if viewing the model of all floors, the gaps will disappear.

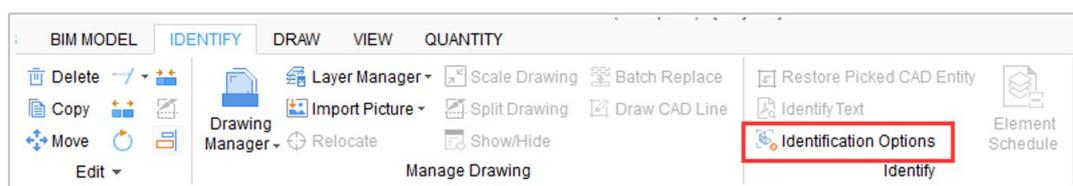
## Identify

### When identifying beams, the beams are not extended to support centerline.

**Question:** After identifying beam entities, I find that the beams are not extended into columns. How to adjust them?

### **Solution:**

1) Before identifying beams, click IDENTIFY > Identification Options.

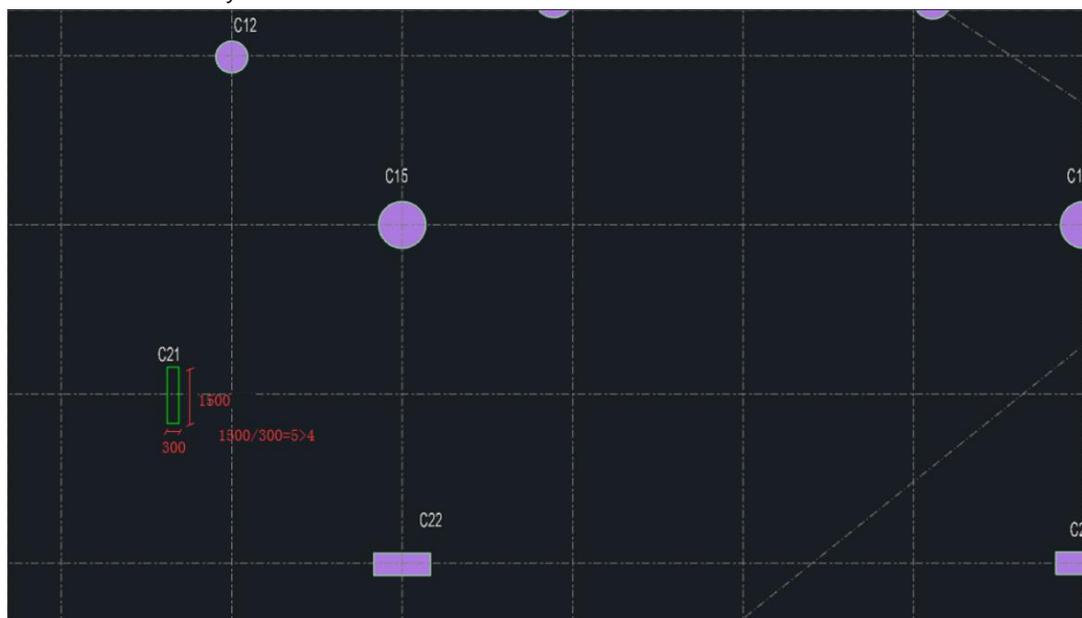


2) In Beam Settings > Tolerance of auto extension for beam end to form intersections with column/wall/beam/foundation, change the set value to a greater one.

Identification Options	
Attribute	Value
<b>1</b> <input type="checkbox"/> Wall Settings	
2 Wall Code:	W,SW
3 Tolerance of thickness of wall (mm):	5
4 Tolerance of auto extension for wall ends to form intersections (mm):	100
5 Tolerance of auto extension for wall end to form intersections with door/window (horizontal) (mm):	100
6 Tolerance of auto extension for wall end to form intersections with door/window (vertical) (mm):	100
7 Tolerance of auto extension for wall ends to form intersections if no column exists (mm):	10
8 Maximum width of opening (mm):	500
9 Maximum thickness of identifiable wall (mm):	300
<b>10</b> <input type="checkbox"/> Door/Window Opening Settings	
11 Door Code:	M,D
12 Window Code:	C,W
13 Wall Opening Code:	O
14 Height above floor of door (mm):	0
15 Height above floor of window (mm):	900
16 Height above floor of wall opening (mm):	600
<b>17</b> <input type="checkbox"/> Beam Settings	
<b>18</b> Tolerance of auto extension for beam end to form intersections with column/wall/beam/foundation (mm):	200
19 Extension of leader for beam (mm):	80
20 Disable Auto-Identify if the width of undimensioned beam exceeds (mm):	1000

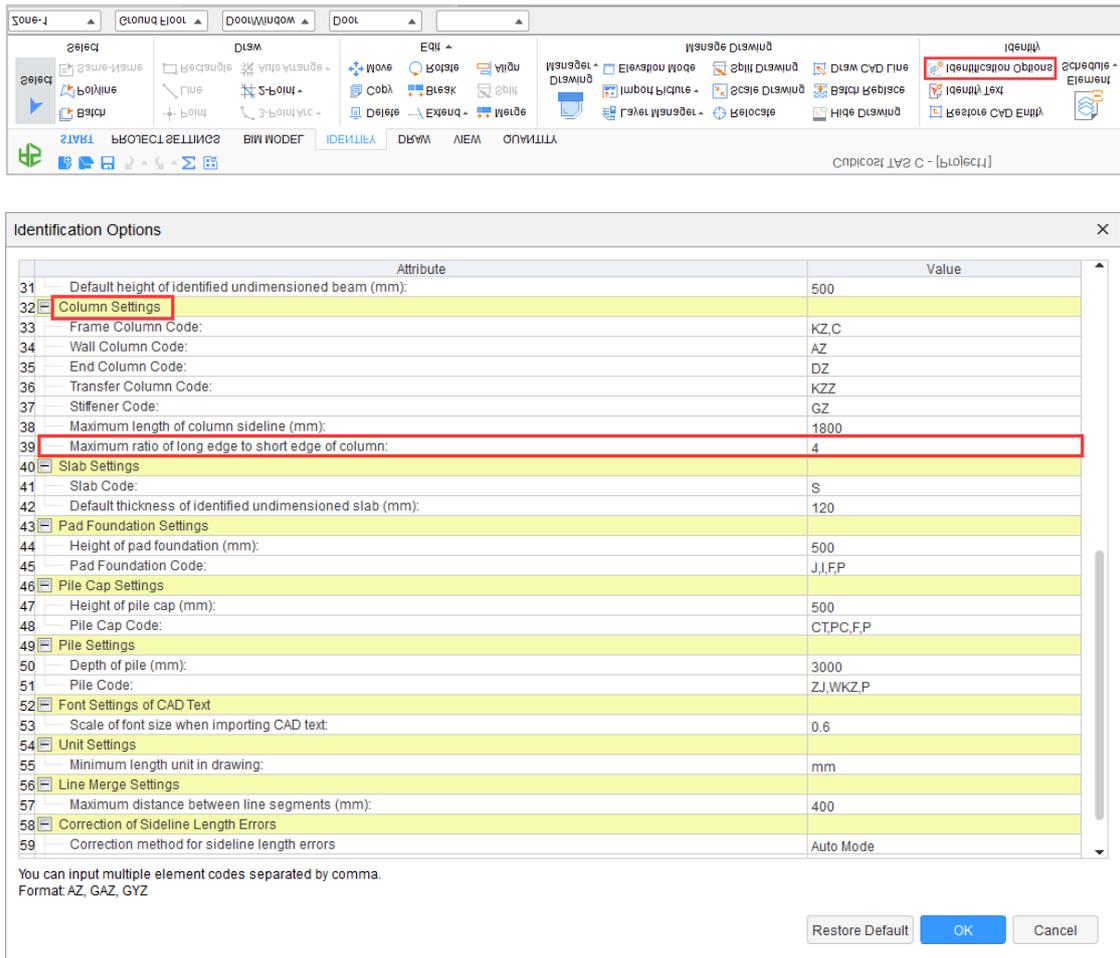
**When identifying columns in a PDF drawing, it is found that only part of the columns can be identified successfully.**

**Question:** When identifying columns in a PDF drawing by color, I find some columns cannot be identified successfully.



### Solution:

After clicking Identify > Identification Options > Column Settings, you will find that the set value for Maximum ratio of long edge to short edge of column is 4. It means that when the ratio of long edge to short edge of column exceeds 4 (see the figure above, long edge is 1500mm, short edge is 300mm, so the ratio is 5, greater than 4), the column will not be identified. To identify the columns successfully, double-click to change the set value.



The screenshot shows the software interface with the 'Identification Options' dialog box open. The 'Column Settings' section is expanded, and the 'Maximum ratio of long edge to short edge of column' is highlighted with a red box, showing a value of 4. The dialog box contains a table of settings with columns for 'Attribute' and 'Value'.

Attribute	Value
31 Default height of identified undimensioned beam (mm):	500
32 <b>Column Settings</b>	
33 Frame Column Code:	KZ,C
34 Wall Column Code:	AZ
35 End Column Code:	DZ
36 Transfer Column Code:	KZZ
37 Stiffener Code:	GZ
38 Maximum length of column sideline (mm):	1800
39 <b>Maximum ratio of long edge to short edge of column:</b>	<b>4</b>
40 <b>Slab Settings</b>	
41 Slab Code:	S
42 Default thickness of identified undimensioned slab (mm):	120
43 <b>Pad Foundation Settings</b>	
44 Height of pad foundation (mm):	500
45 Pad Foundation Code:	J,I,FP
46 <b>Pile Cap Settings</b>	
47 Height of pile cap (mm):	500
48 Pile Cap Code:	CT,PC,FP
49 <b>Pile Settings</b>	
50 Depth of pile (mm):	3000
51 Pile Code:	Z,J,WKZ,P
52 <b>Font Settings of CAD Text</b>	
53 Scale of font size when importing CAD text:	0.6
54 <b>Unit Settings</b>	
55 Minimum length unit in drawing:	mm
56 <b>Line Merge Settings</b>	
57 Maximum distance between line segments (mm):	400
58 <b>Correction of Sideline Length Errors</b>	
59 Correction method for sideline length errors	Auto Mode

You can input multiple element codes separated by comma.  
Format: AZ, GAZ, GYZ

Restore Default OK Cancel

**Note:** The rule that the column will not be identified if the ratio of long edge to short edge exceeds 4 is embedded here because from the business perspective, if the ratio of long edge to short edge exceeds 4, the corresponding element is probably a wall.

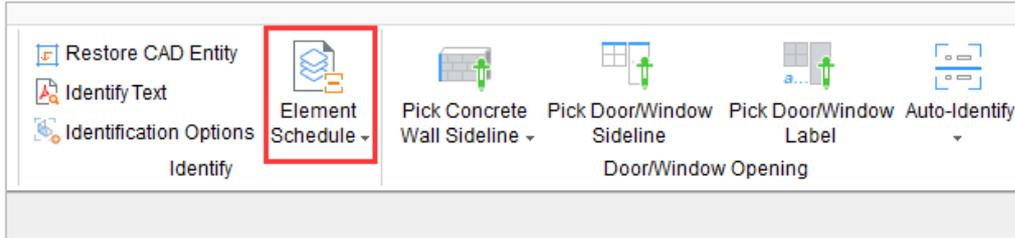
## Why doors and windows cannot be identified successfully?

**Question:**

I follow the door/window identification procedure to identify them, but nothing is identified.

**Solution:**

When identifying door/window, identify the door/window schedule first, and then prick wall sideline. In 2D drawings, there is no height information on door/window openings, so the door/window openings cannot be identified correctly by identifying them directly. To identify door/window openings correctly, you need to identify the door/window schedule first to complete their attribute info, and then follow the door/window identification procedure to identify them.



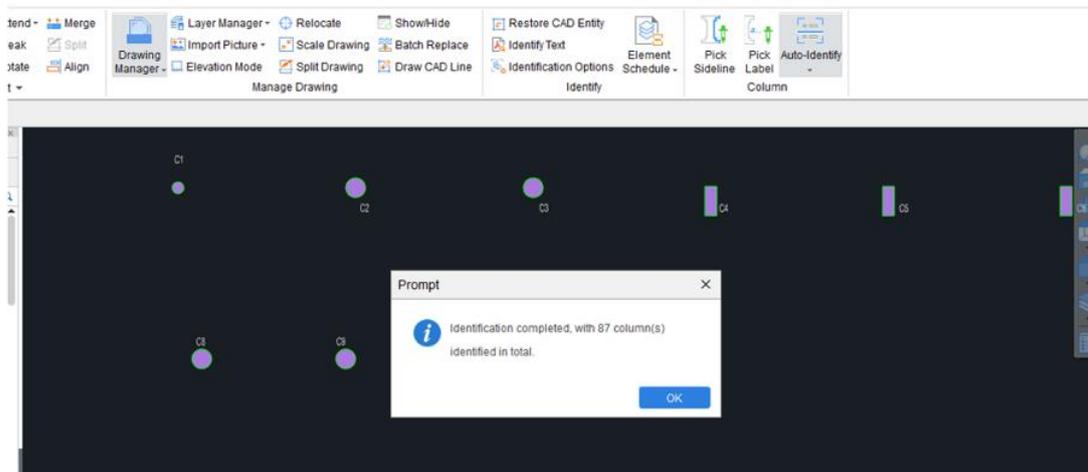
**Related article:** <https://tas-helpcenter.cubicost.com/hc/en-us/articles/360022074152-Identify-Element-Schedule>

## When should I use click-identify instead of auto-identify, and what is the difference?

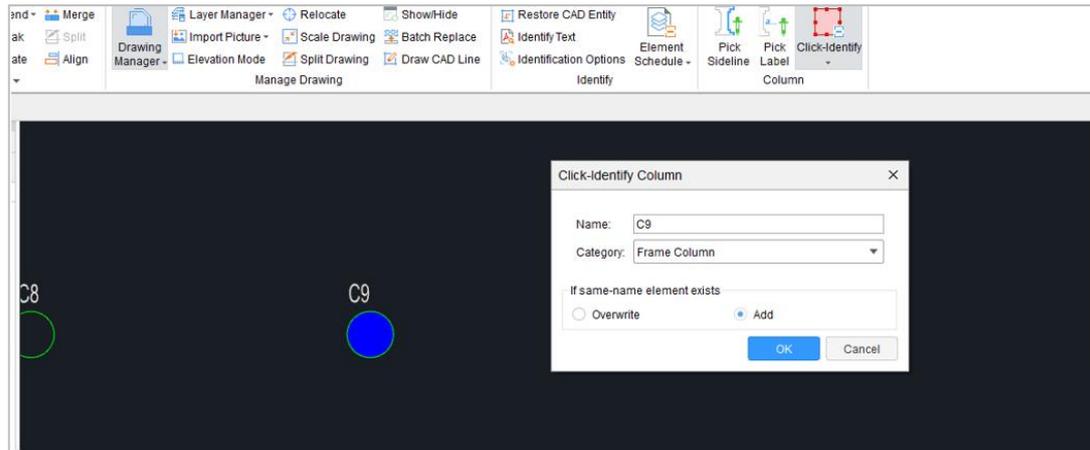
**Question:** When identifying entities, there are 3 methods: Auto-Identify, Click-Identify and Drag-Identify. In what circumstances should I use them respectively?

**Solution:**

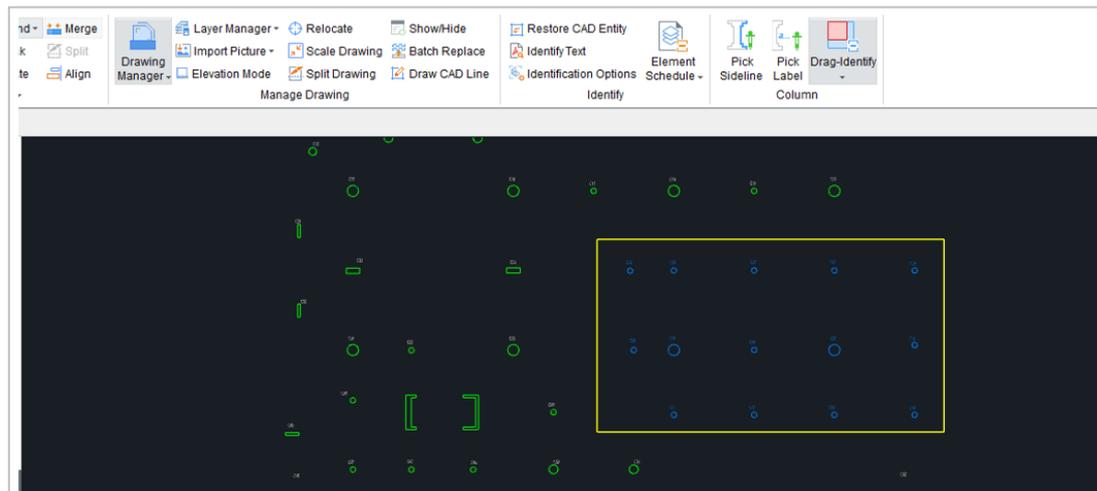
If you have a high-quality drawing, you can use Auto-Identify mode. Auto-Identify can help you identify the entities quickly, and you need to check the entities after auto-identify.



You can use Click-Identify mode to identify individual entities. Click-Identify can help you identify the entities accurately.



You can use Drag-Identify mode to identify the entities in an area. Drag-Identify mode is easier to check than Auto-Identify mode, and more efficient than Click-Identify mode.

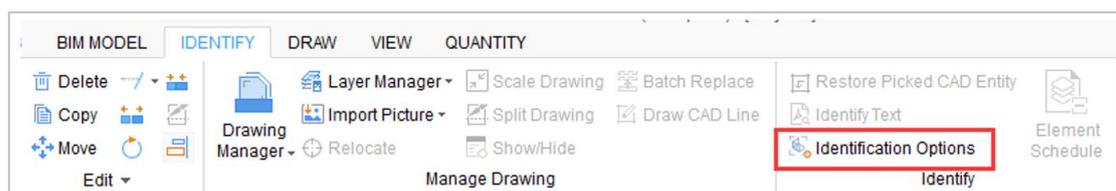


## The wall cannot be identified.

**Question:** After identifying wall entities, I find that the walls with thickness exceeding 300mm are not identified.

### Solution:

Before identifying beams, click IDENTIFY > Identification Options.



In Wall Settings > Maximum thickness of identifiable wall, change the value from 300 to the maximum thickness in your drawing.

Identification Options		
	Attribute	Value
1	<input type="checkbox"/> Wall Settings	
2	Wall Code:	W,SW
3	Tolerance of thickness of wall (mm):	5
4	Tolerance of auto extension for wall ends to form intersections (mm):	100
5	Tolerance of auto extension for wall end to form intersections with door/window (horizontal) (mm):	100
6	Tolerance of auto extension for wall end to form intersections with door/window (vertical) (mm):	100
7	Tolerance of auto extension for wall ends to form intersections if no column exists (mm):	10
8	Maximum width of opening (mm):	500
9	Maximum thickness of identifiable wall (mm):	300
10	<input type="checkbox"/> Door/Window Opening Settings	
11	Door Code:	M,D
12	Window Code:	C,W
13	Wall Opening Code:	O
14	Height above floor of door (mm):	0
15	Height above floor of window (mm):	900
16	Height above floor of wall opening (mm):	600
17	<input type="checkbox"/> Beam Settings	

## When the element/finish schedules are in PDF format, how to identify them?

**Question:** If the element schedule or finish schedule is in PDF format, and the text therein are difficult to identify, what should I do?

**Solution:**

For finish/element schedules in PDF format, convert PDF files to Excel first, and then identify them. (You can use the PDF converter provided by Cubicost. Download link: <http://www.mozis.org/#/>)

## Why the finishes element is identified as multiple elements when identifying finish schedule?

**Question:** If there are /, -, & or other special symbols in the finish schedule, the element cannot be identified correctly, thus multiple element names will be generated.

AREA	FLOOR	SKIRTING	WALL	CEILING
<b>STAIRS AND LOBBIES</b>				
LIFT LOBBY	600MM X 600MM X 12MM THICK NON-SLIP HOMOGENOUS TILES	150MM HIGH STAINLESS STEEL SKIRTING	HEAVY GAUGE VITREOUS ENAMEL (VE) PANEL	BAFFLE ALUMINIUM CEILING. SOFFIT IN ACOUSTIC CELLULOSE SPRAY
PUBLIC STAIRS/RAMP	600MM X 600MM X 12MM THICK NON-SLIP HOMOGENOUS TILES	150MM HIGH STAINLESS STEEL SKIRTING	HEAVY GAUGE VITREOUS ENAMEL (VE) PANEL	BAFFLE ALUMINIUM CEILING. SOFFIT IN ACOUSTIC CELLULOSE SPRAY
SMOKE STOP LOBBY / FIRE FIGHTING LOBBY	SCREED	N/A	SKIM COAT WITH ANTI DUST PAINT	SKIM COAT WITH ANTI DUST PAINT
FIRE ESCAPE STAIRS	SCREED	N/A	SKIM COAT WITH ANTI DUST PAINT	SKIM COAT WITH ANTI DUST PAINT
<b>PUBLIC AREAS</b>				
MRT LINK CONNECTION (B3)	600MM X 600MM X 12MM THICK NON-SLIP HOMOGENOUS TILES	150MM HIGH STAINLESS STEEL SKIRTING	HEAVY GAUGE VITREOUS ENAMEL (VE) PANEL	BAFFLE ALUMINIUM CEILING. SOFFIT IN ACOUSTIC CELLULOSE SPRAY
ORIENTATION PLAZA	600MM X 600MM X 12MM THICK NON-SLIP HOMOGENOUS TILES	150MM HIGH STAINLESS STEEL SKIRTING	HEAVY GAUGE VITREOUS ENAMEL (VE) PANEL	BAFFLE ALUMINIUM CEILING. SOFFIT IN ACOUSTIC CELLULOSE SPRAY
CONCOURSE AREA / BOARDING BAY / ALIGHTING BAY / PUBLIC CORRIDOR	600MM X 600MM X 12MM THICK NON-SLIP HOMOGENOUS TILES	150MM HIGH STAINLESS STEEL SKIRTING	HEAVY GAUGE VITREOUS ENAMEL (VE) PANEL/ GLASS PANEL	BAFFLE ALUMINIUM CEILING. SOFFIT IN ACOUSTIC CELLULOSE SPRAY

**Solution:**

In a finish schedule, if the name of finish element contains /, -, &, and the symbols represent two different finish elements (see the representation in red box below), they will be identified as two different finish elements, so the identification result is correct. In this case, you do not need to do additional operations.

If the symbols in the drawing are not used to distinguish the finish types, additional finish types will be identified (see the figure below). In this case, please delete the symbols manually first, and then identify them.

Floor	25mm thk. c/s screeding finished with epoxy paint
Skirting	20x100mm(H) c/s rendering
Wall	15mm thk. c/s plaster w/ emulsion paint



The feature will be enhanced in later versions. Stay tuned.

**Error Message**

**A message stating the failure of slab merge appears. Why?**

**Question:** When merging slabs, a message prompting failure appears. Why?

**Solution:**

The premise of merging slabs is that the slabs are tangent to each other, belong to the same element,

and have the same attributes (excluding display style).

If a merge failure message appears, you can check the following aspects:

- 1 ) Check whether the slabs to merge have consistent attributes.
- 2 ) Check whether gaps exist between slabs.

### Related Question:

Why a message stating the slabs to set variable cross-section must be adjacent appears when setting variable cross-sections?

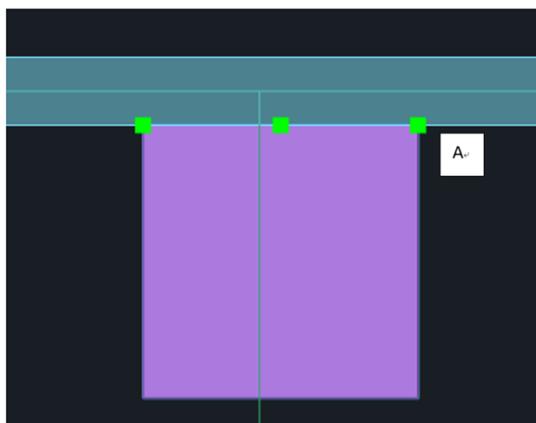
**Question:** When setting variable cross-sections for raft foundations, a message stating the raft foundations to set variable cross-section must be adjacent appears. Why?

#### Solution:

The two slabs to set variable cross-section must have a height difference and their adjacent edges must be tangent. If the message above appears, please check whether there are gaps between the two slabs.

## The entities with error found after validity check are invisible.

**Question:** In some cases, the finish entities are invisible. I can only see the three points representing the existence of the entity. As shown in the figure below, at the location A, there is a wall finish entity. This problem occurs because a higher precision is set in TAS C internally.

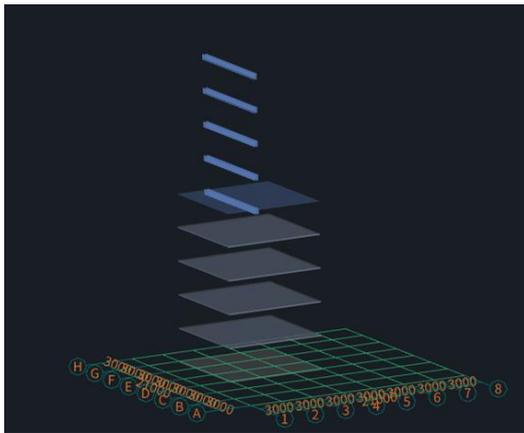


#### Solution:

When calculating quantities, you can ignore it, because it has no effect on the calculation result. To delete it visually, click Delete.

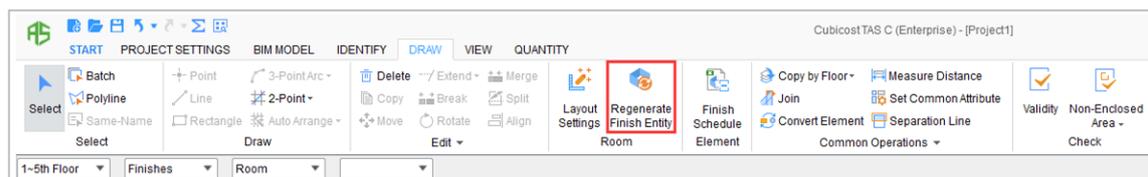
## After setting typical floors, the elevations of finishes become incorrect.

**Question:** I have already arranged finishes for some floors. After changing these floors to typical floors, the display of suspended ceilings becomes incorrect. This problem occurs because the suspended ceiling of current floor is attached to the upper floor slab. After setting the current floor as a typical floor, the suspended ceiling is still attached to the upper floor slab. But then the floor slab elevation is getting higher, thus the elevation of suspended ceiling in the typical floor will also get higher unexpectedly.



### **Solution:**

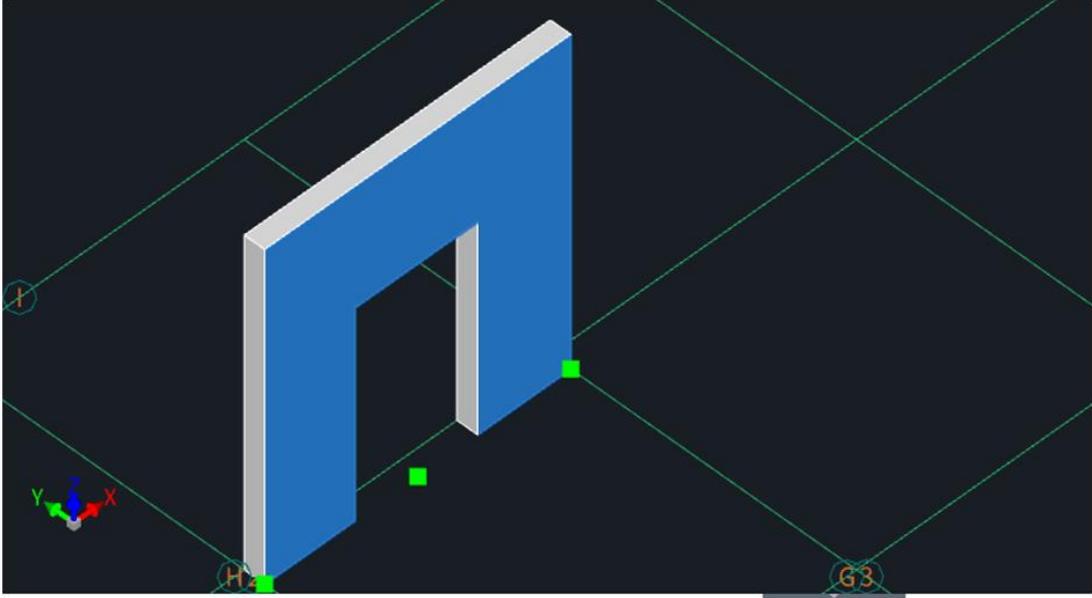
Select and delete the incorrect finish entities. For finishes within rooms, you can generate them correctly by clicking Regenerate Finish Entity directly. For finishes outside rooms, you need to draw them again manually.



## Calculation

### Can the sides of door/window openings be calculated? How?

**Question:** If there are door/window openings in walls, is the side area of the door/window openings calculated when calculating wall finish area? How?



View Element Entity Quantity Expression

Element Type:  Element Name: WF-1 Quantity Name: [All]

	Quantity Name	Quantity Expression	Quantity	Unit
1	Area of Finish to Wall Finish	(3.000*3.300)<Original Area of Finish>-2.520<Deduct door>+0.378<Add area of side of door>	7.758	m2
2	Area of Finish to Concrete Surface		7.758	m2

**Solution:**

The side area of door/window openings is calculated when calculating wall finish area.

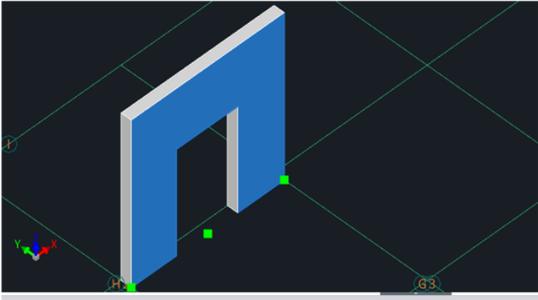
**Calculation Principle:**

Judge the side area of openings based on the location of the door/window opening frame.

By default, the distance between frame centerline and wall centerline is 0. In this case, add half of the side area of opening to the wall finish to each side of wall.

The one side wall finish area adding side area of opening:  $\text{opening height} * (\text{wall thickness} - \text{frame thickness}) / 2 * 2 + \text{opening width} * (\text{wall thickness} - \text{frame thickness}) / 2$

Attribute Editor			
Attribute	Value	Add	
Common Attribute			
Name	Door-1	<input type="checkbox"/>	
Width of Opening (mm)	1200	<input type="checkbox"/>	
Height of Opening (mm)	2100	<input type="checkbox"/>	
Height above Floor (mm)	0	<input type="checkbox"/>	
Category	Common Door	<input type="checkbox"/>	
Material	Metal	<input type="checkbox"/>	
Opening Method		<input type="checkbox"/>	
Frame Thickness (mm)	60	<input type="checkbox"/>	
Frame Centerline to Wall Centerline (mm)	0	<input type="checkbox"/>	
Horizontal Gap between Opening and F...	0	<input type="checkbox"/>	
Vertical Gap between Opening and Fra...	0	<input type="checkbox"/>	



View Element Entity Quantity Expression

Element Type:  Element Name: WF-1 Quantity Name: [All]

	Quantity Name	Quantity Expression	Quantity	Unit
1	Area of Finish to Wall Finish	(3.000*3.300)<Original Area of Finish>-2.520<Deduct door>+0.378<Add area of side of door>	7.758	m2
2	Area of Finish to Concrete Surface	$2.1 * (0.2 - 0.06) / 2 * 2 + (0.2 - 0.06)$	7.758	m2

## Related Question:

How to calculate the wall finishes at a lift opening?

**Question:** After laying wall finishes to the walls outside a lift opening, how can I add the quantity of finishes to the side of lift opening to the quantities of finishes to walls outside the lift opening?

### Solution:

Incorporate all quantities for opening side to the outside wall finishes. Achieve this by adjusting the distance between frame centerline and wall centerline.

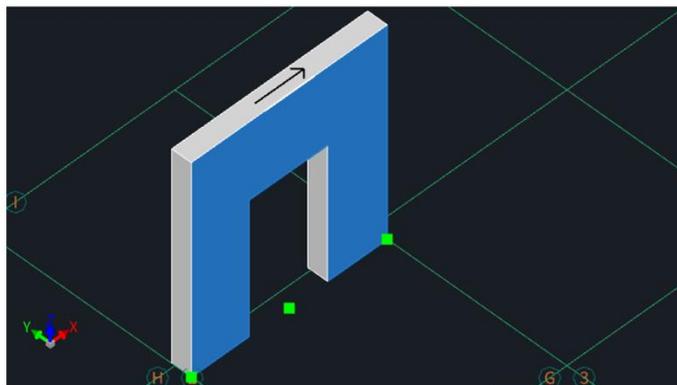
### Example:

Wall thickness = 300mm, door height = 2100mm, door width = 1200mm.

1) Modify the distance between frame centerline and wall centerline to -120. Note that if the frame is placed on the left side of the wall, represent it with a negative sign.

Attribute Editor		
Attribute	Value	
▼ Common Attribute		
Name	Door-1	
Width of Opening (mm)	1200	
Height of Opening (mm)	2100	
Height above Floor (mm)	0	
Category	Common Door	
Material	Metal	
Opening Method		
Frame Thickness (mm)	60	
Frame Centerline to Wall Centerline (mm)	-120	$(300-60) / 2$
Horizontal Gap between Opening and Fra...	0	
Vertical Gap between Opening and Frame ...	0	
Depth of Opening (mm)	300	
Slope with Wall	Yes	
Entity Object Type	Normal Object	

2) After clicking Summary Calculate, view the quantity of wall finish.



View Element Entity Quantity Expression				
Quantity Name	Quantity Expression	Quantity	Unit	
1 Area of Finish to Wall Finish	$(3.000*3.300) \times \text{Original Area of Finish} - 2.520 \times \text{Deduct door} + 1.296 \times \text{Add area of side of door}$	8.676	m2	
2 Area of Finish to Concrete Surface	$2.1 * (0.3 - 0.6) * 2 + 1.2 * (0.3 - 0.06)$	8.676	m2	

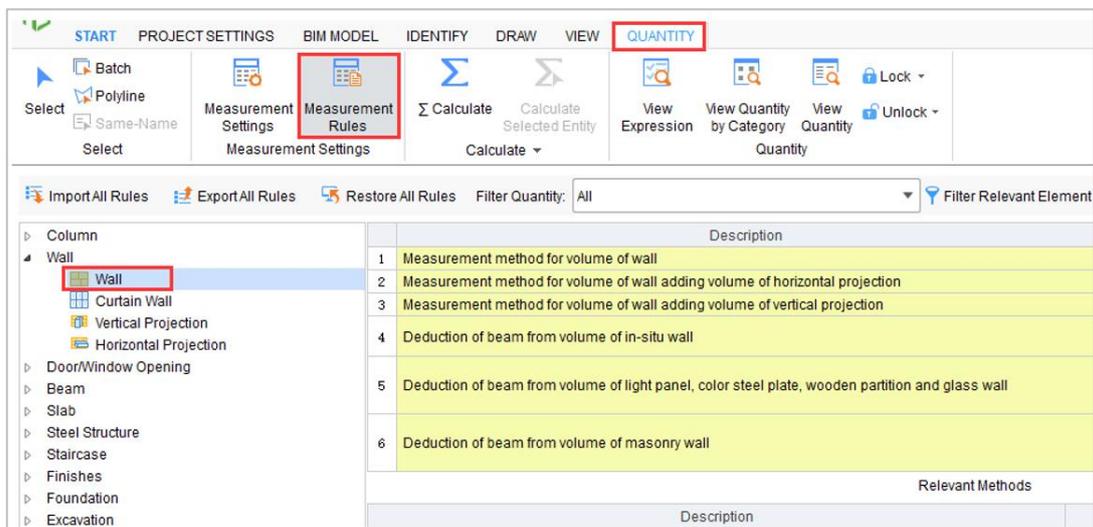
**Note:** To calculate wall finishes accurately, you'd better draw the lift opening using the door element.

# For structural walls, the volume of beam is not deducted; for non-structural walls, the volume of beam is deducted.

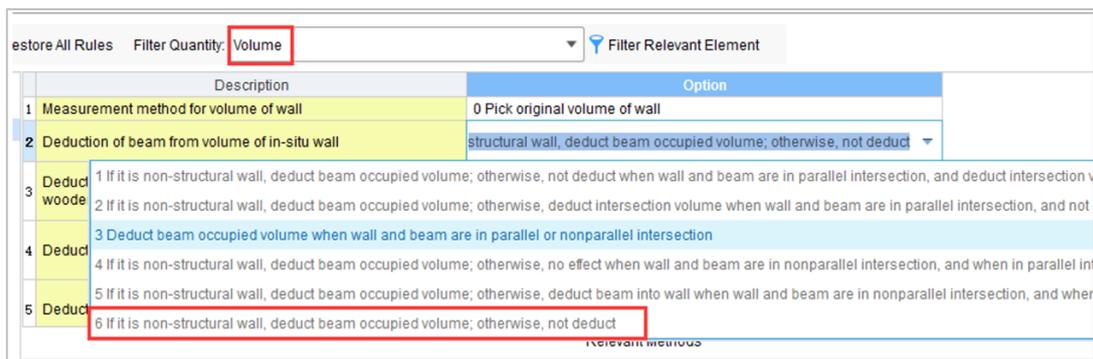
**Question:** When calculating wall volumes, how can I achieve that the beam volumes are not deducted from structural walls, but deducted from non-structural walls?

**Solution:**

Click QUANTITY > Measurement Rules > Wall.



Select Volume for Filter Quantity; click Filter Relevant Element, and then select Beam. For the No. 2 item: Deduction of beam from volume of in-situ wall, select the No. 6 option.



In Relevant Methods, for the No. 1 item: Deduction of wall (in-situ) from volume of in-situ beam, select the No. 6 option.

Description	Option
1 Measurement method for volume of wall	0 Pick original volume of wall
2 Deduction of beam from volume of in-situ wall	6 If it is non-structural wall, deduct beam occupied volume; otherwise, not deduct
3 Deduction of beam from volume of light panel, color steel plate, wooden partition and glass wall	2 If it is non-structural wall, deduct beam occupied volume; otherwise, deduct intersection volume when wall and beam are in parallel intersection, and not deduct when in nonparallel intersection
4 Deduction of beam from volume of masonry wall	2 If it is non-structural wall, deduct beam occupied volume; otherwise, deduct intersection volume when wall and beam are in parallel intersection, and not deduct when in nonparallel intersection
5 Deduction of beam from volume of precast wall	2 If it is non-structural wall, deduct beam occupied volume; otherwise, deduct intersection volume when wall and beam are in parallel intersection, and not deduct when in nonparallel intersection

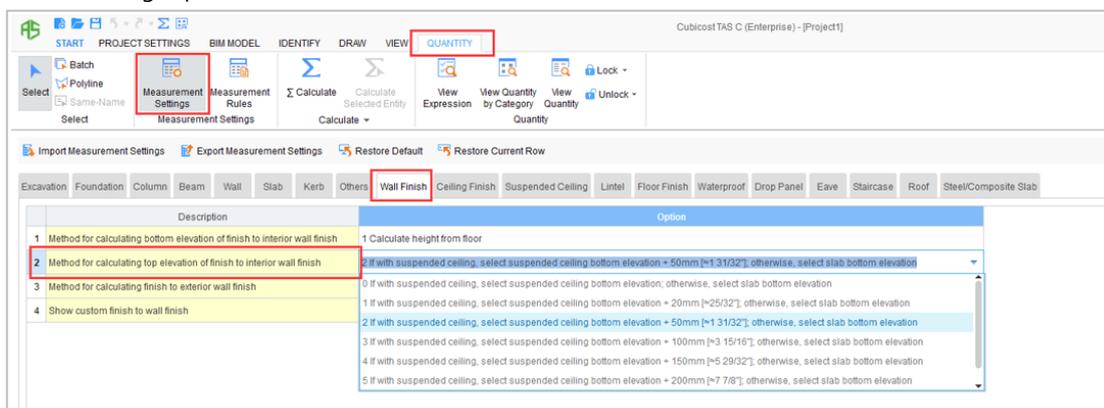
Relevant Methods	
Description	Option
1 Deduction of wall (in-situ) from volume of in-situ beam	not deduct wall from beam; otherwise, deduct wall occupied volume
2 Dedu	1 If it is non-structural wall, not deduct wall from beam; otherwise, deduct intersection volume when beam and wall are in parallel intersection, and not deduct when in nonparallel intersection, and when in parallel
3 Dedu	2 If it is non-structural wall, not deduct wall from beam; otherwise, not deduct when beam and wall are in nonparallel intersection, and when in parallel
4 Dedu	3 If it is non-structural wall, not deduct wall from beam; otherwise, deduct intersection volume when beam and wall are in nonparallel intersection, and not deduct when in parallel
5 Dedu	4 If it is non-structural wall, not deduct wall from beam; otherwise, deduct wall occupied volume when beam and wall are in nonparallel intersection, and not deduct when in parallel
6 Dedu	5 Deduct wall occupied volume when beam and wall are in parallel or nonparallel intersection
beam	6 If it is non-structural wall, not deduct wall from beam; otherwise, deduct wall occupied volume

## The default difference between wall finish height and suspended ceiling height is not what I want. Where can I adjust it?

**Question:** When there is a ceiling, by default, the wall ceiling top elevation will be 50mm more than the suspended ceiling elevation. Can I modify this setting?

**Solution:**

Click QUANTITY > Measurement Settings > Wall Finish, modify the option for the No. 2 item: Method for calculating top elevation of finish to interior wall finish.



## Related Question:

When there are suspended ceilings, it is required to calculate two layers of wall finishes. How should I adjust the settings?

**Question:** When there are suspended ceilings, I need to calculate the wall finishes in two layers: in one layer, calculate the wall finish wholly, and in another layer, calculate the wall finish from floor bottom elevation to the height 50mm above the suspended ceiling. What should I do?

## Solution:

Click Measurement Settings > Wall Finish, modify the option for the No. 4 item to expand the measurement settings for custom wall finish, and then change the option for the No. 6 item: Method for calculating top elevation of custom finish to interior wall finish, to "select slab bottom elevation". When viewing the detailed expressions for the selected wall finish, you can find the quantities for wall finish and custom finish separately.

The screenshot shows the 'Measurement Settings' window for 'Wall Finish'. The 'Option' column for item 4, 'Show custom finish to wall finish', is expanded to show '1 Yes' selected.

Description	Option
1 Method for calculating bottom elevation of finish to interior wall finish	1 Calculate height from floor
2 Method for calculating top elevation of finish to interior wall finish	2 If with suspended ceiling, select suspended ceiling bottom elevation + 50mm [=1 31/32"]; otherwise, select slab bottom elevation
3 Method for calculating finish to exterior wall finish	0 If with basement, calculate from floor bottom elevation; if without basement, calculate from ground elevation for first floor, and calculate from fl...
4 Show custom finish to wall finish	1 Yes

The screenshot shows the 'Measurement Settings' window for 'Wall Finish'. The 'Option' column for item 6, 'Method for calculating top elevation of custom finish to interior wall finish', is expanded to show '1 If with suspended ceiling, select suspended ceiling bottom elevation + 50mm [=1 31/32"]; otherwise, select slab bottom elevation'.

Description	Option
1 Method for calculating bottom elevation of finish to interior wall finish	1 Calculate height from floor
2 Method for calculating top elevation of finish to interior wall finish	2 If with suspended ceiling, select suspended ceiling bottom elevation + 50mm [=1 31/32"]; otherwise, select slab bottom elevation
3 Method for calculating finish to exterior wall finish	0 If with basement, calculate from floor bottom elevation; if without basement, calculate from ground elevation for first floor, and calculate from fl...
4 Show custom finish to wall finish	1 Yes
5 Method for calculating bottom elevation of custom finish to interior wall	0 Calculate height from skirting
6 Method for calculating top elevation of custom finish to interior wall finish	1 If with suspended ceiling, select suspended ceiling bottom elevation + 50mm [=1 31/32"]; otherwise, select slab bottom elevation
7 Method for calculating custom finish to exterior wall finish	0 If with suspended ceiling, select suspended ceiling bottom elevation; otherwise, select slab bottom elevation 1 If with suspended ceiling, select suspended ceiling bottom elevation + 50mm [=1 31/32"]; otherwise, select slab bottom elevation 2 If with suspended ceiling, select suspended ceiling bottom elevation + 100mm [=3 15/16"]; otherwise, select slab bottom elevation 3 If with suspended ceiling, select suspended ceiling bottom elevation + 150mm [=5 29/32"]; otherwise, select slab bottom elevation 4 Select slab bottom elevation

Quantity Name	Quantity Expression	Quantity	Unit	Count Tag	Remarks
1 Area of Finish to Wall Finish	$(3.000 \times 2.750) < \text{Original Area of Finish} >$	8.250	m2	<input checked="" type="checkbox"/>	
2 Area of Custom Finish to Wall Finish	$(3.000 \times 3.000) < \text{Original Area of Custom Finish} >$	9.000	m2	<input checked="" type="checkbox"/>	
3 Area of Finish to Brick Surface		8.250	m2	<input checked="" type="checkbox"/>	
4 Area of Custom Finish to Brick Surface		9.000	m2	<input checked="" type="checkbox"/>	

## How to make the calculation of formwork or finish quantities change between by length and by area?

Question:

I want to calculate the wall formwork by area, not length. How to adjust it?

Solution:

In QUANTITY > Measurement Settings > Wall > Method for calculating edge and break formwork, we provide options for calculating by area or length, so you can select the corresponding options as needed.

We provide the options for calculating by area or length for the following items: beam side formwork, wall end formwork, slab edge and break formwork, vertical surface of suspended ceiling, vertical floor finish, vertical waterproof, staircase stringer formwork. Click QUANTITY > Measurement Settings, select the corresponding element type, and find the relevant settings.

Description	Option
10 Provide formwork to top of horizontal projection if the surface slopes from the horizont...	15
11 Method for calculating edge and break formwork	calculate by length if the width is less than the set value; otherwise, calculate by area
12 Condition for calculating edge and break formwork in stages (formwork width (m) <=)	0 Not calculate in stages: calculate by area
13 Segmentation standard of edge and break formwork	1 Calculate in stages: calculate by length if the width is less than the set value; other... 2 Calculate in stages: calculate by area

# The difference between wall formwork area and strutting high formwork area (Malaysia)

**Question:** When viewing wall quantities by category, there are Area of Formwork and Area of Formwork for Strutting High. I am wondering what is the difference between them.

Classification Condition						Quantity					
Floor	Material	Concrete Grade	Entity Type	Thickness	Name	Volume(m3)	Area of Formwork(m2)	Area of Formwork for Strutting High(m2)	Length of Formwork to Edge and Break in Stages(0-0.25m)(m)	Area(m2)	
1	Ground Floor	In-situ Concrete	C30	Vertical	200	Wall-1	6.000	60.000	18.000	10.000	30.000
2	Total						6.000	60.000	18.000	10.000	30.000

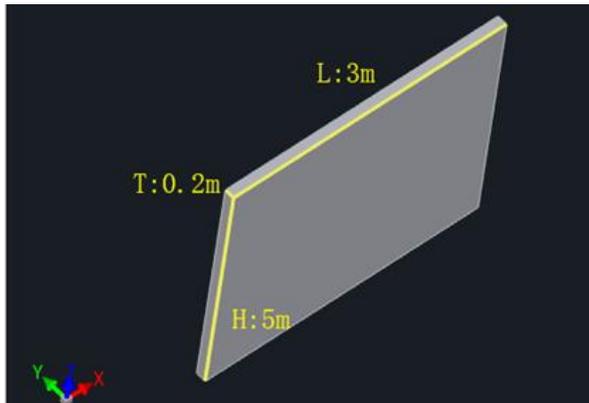
### 1) Description:

Area of Formwork: Calculate the area of formwork to the whole wall.

Area of Formwork for Strutting High: Calculate the area of formwork to the wall part exceeding 3.5m.

### 2) Example:

Condition: Wall thickness = 0.2m, height = 5m, length = 6m, and the starting height to calculate strutting high = 3.5m.



Area of Formwork: quantity for whole wall (5m) = (6 + 6) \* 5 = 60

Area of Formwork for Strutting High: quantity for wall part (height > 3.5m) = (6 + 6) \* 1.5 = 18

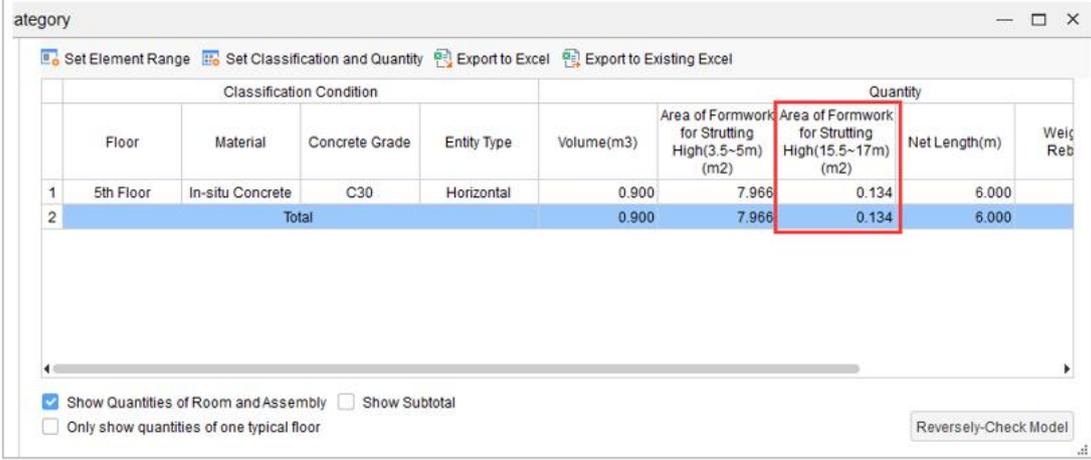
### 3) Measurement Settings:

The quantity is calculated based on the option for Method for calculating strutting high.

Excavation Foundation Column Beam Wall Slab Kerb Others Wall Finish Ceiling Finish Suspended Ceiling Lintel Floor Finish Waterproof										
Description						Option				
5	Starting height to judge strutting high (m)					3.500				
6	Starting height to calculate strutting high (m)					3.500				
7	Maximum number of stages for strutting high					30				
8	Method for calculating strutting high					0 Not calculate strutting high in stages: calculate total quantities				
9	Height of stage for strutting high (m)					1.500				
10	Wall thickness modulus					Wall thickness modulus				
11	Provide formwork to top of horizontal projection if the surface slopes fr...					15				
12	Method for calculating edge and break formwork					1 Calculate in stages: calculate by length if the width is less than the set value; otherwi...				

## The stage range for strutting high is large

**Question:** When viewing beam or slab quantities, I find that the stage range is pretty large. I have no idea why this occurs. How to adjust it ?



	Classification Condition				Quantity				
	Floor	Material	Concrete Grade	Entity Type	Volume(m3)	Area of Formwork for Strutting High(3.5~5m) (m2)	Area of Formwork for Strutting High(15.5~17m) (m2)	Net Length(m)	Weight
1	5th Floor	In-situ Concrete	C30	Horizontal	0.900	7.966	0.134	6.000	
2	Total				0.900	7.966	0.134	6.000	

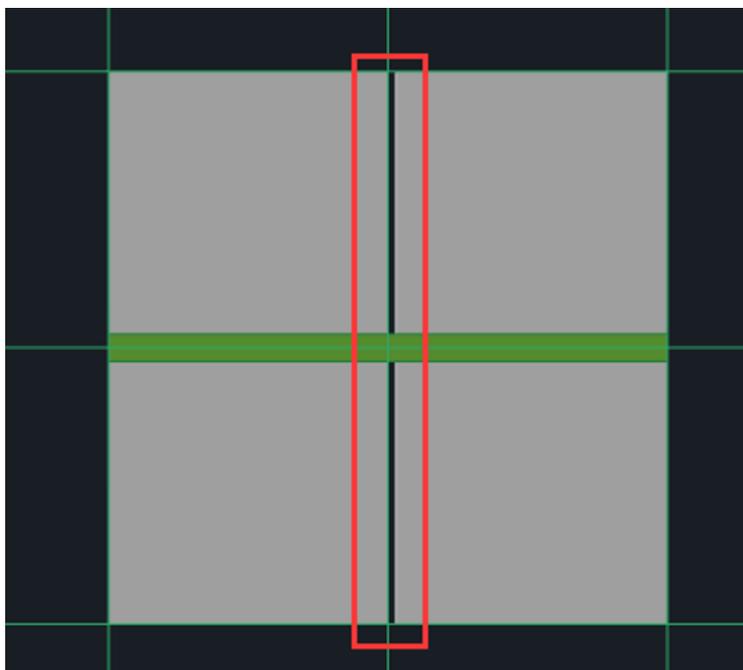
Show Quantities of Room and Assembly  Show Subtotal  
 Only show quantities of one typical floor

Reversely-Check Model

### **Solution:**

Check whether there are slabs in the lower floor. If not, draw slab entities in the lower floor, and then perform Summary Calculate again.

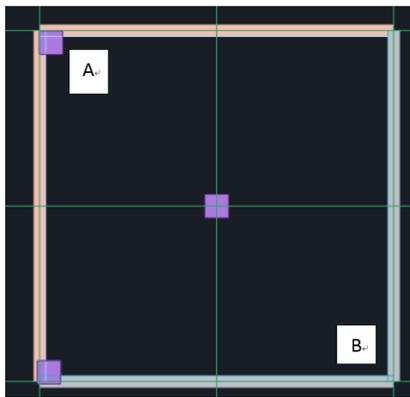
If there are slabs in the lower floor, check whether there are gaps between slabs. If gaps exist (as shown in the figure below), extend slabs to eliminate the gaps, and then perform Summary Calculate again.



## Quantity Extraction

# How to extract quantities by parent entity type or parent entity material?

**Question:** In actual projects, the structural materials may include concrete, brick and so on. As shown in the figure, the material of the wall at location A is brick, and the material of the wall at location B is concrete. How can I distinguish the finish quantities for different materials?



### Solution:

- 1) Create a room, and add attached wall finish.
- 2) Draw it in an enclosed area.
- 3) Select the wall finish in the location A, view the Material of Attached Surface attribute, and you will find the material of its parent entity, Brick, is shown.

Attribute	Value
End Top Elevation (m)	Wall_Top_Elevation(3.000)
Start Bottom Elevation (m)	Wall_Bottom_Elevation(0...
End Bottom Elevation (m)	Wall_Bottom_Elevation(0...
Material of Attached Surface	(Brick)
Parent Entity Type	(Wall)
Associated Unit Type	

- 4) Select the wall finish in the location B, view the Material of Attached Surface attribute, and you will find the material of its parent entity, Concrete, is shown.

End Top Elevation (m)	Wall_Top_Elevation(3.000)
Start Bottom Elevation (m)	Wall_Bottom_Elevation(0...
End Bottom Elevation (m)	Wall_Bottom_Elevation(0...
Material of Attached Surface	(In-situ Concrete)
Parent Entity Type	(Wall)
Associated Unit Type	

5) Click Summary Calculate > View Quantity by Category > select Wall Finish > set classification condition > select Material of Attached Surface.

View Quantity by Category

Column  
Wall  
Curtain Wall  
Room  
Wall Finish

Set Element Range Set Classification and Quantity Export to Excel Export to Existing Excel

Classification Condition			Quantity		
Floor	Name	Material of Attached Surface	Area of Finish to Wall Finish(m2)	Area of Finish to Brick Surface(m2)	Area of Finish to Concrete Surface(m2)
1	Ground Floor	Brick	32.235	32.235	
2		In-situ Concrete	47.131		47.131
3	Total		79.366	32.235	47.131

Show Quantities of Room and Assembly  Show Subtotal  
 Only show quantities of one typical floor

Reversely-Check Model

## In View Expression, the added items cannot be deleted.

**Question:** In View Expression, the quantity items I inserted or obtained via 3D measure cannot be deleted.

### Solution:

In View Expression, after inserting quantity items or using 3D Measure, the associated entities will be locked. To delete these added (white) quantity items, you need to unlock the associated entities first (Fig. 1), select the added quantity item, and click Delete on the toolbar.

Element Type: [ ] Element Name: Column-1 Quantity Name: [All]

Quantity Name	Quantity Expression	Quantity	Unit	Count Tag	Remarks
1 Volume	0.400<Length>*0.400<Width>*3.000<Height>	0.480	m3	<input checked="" type="checkbox"/>	
2 Area of Formwork	4.800<Original Area of Formwork to Column>-1.200<Deduct wall>	3.600	m2	<input type="checkbox"/>	
3 Number		1	pc	<input checked="" type="checkbox"/>	
4 Weight of Rebar	0.480<Volume>*150.000<Steel Ratio>	72.000	kg	<input checked="" type="checkbox"/>	
5 Girth	(0.400<Length>+0.400<Width>)*2	1.600	m	<input checked="" type="checkbox"/>	
6 Area of Formwork	1.200	1.200	m2	<input checked="" type="checkbox"/>	3D Measure

Element Type: [ ] Element Name: Column-1 Quantity Name: [All]

Quantity Name	Quantity Expression	Quantity	Unit	Count Tag	Remarks
1 Volume	0.400<Length>*0.400<Width>*3.000<Height>	0.480	m3	<input checked="" type="checkbox"/>	
2 Area of Formwork	4.800<Original Area of Formwork to Column>-1.200<Deduct wall>	3.600	m2	<input type="checkbox"/>	
3 Number		1	pc	<input checked="" type="checkbox"/>	
4 Weight of Rebar	0.480<Volume>*150.000<Steel Ratio>	72.000	kg	<input checked="" type="checkbox"/>	
5 Girth	(0.400<Length>+0.400<Width>)*2	1.600	m	<input checked="" type="checkbox"/>	
6 Area of Formwork	1.200	1.200	m2	<input checked="" type="checkbox"/>	3D Measure

## Check

# How to quickly find/locate an entity in Element List?

**Question:** How can I find the corresponding location of the selected entity quickly in the Element List?

**Solution:**

This feature is not available in the current version. In the next release, you can locate the corresponding sub element in the Element List by holding Alt+Click.