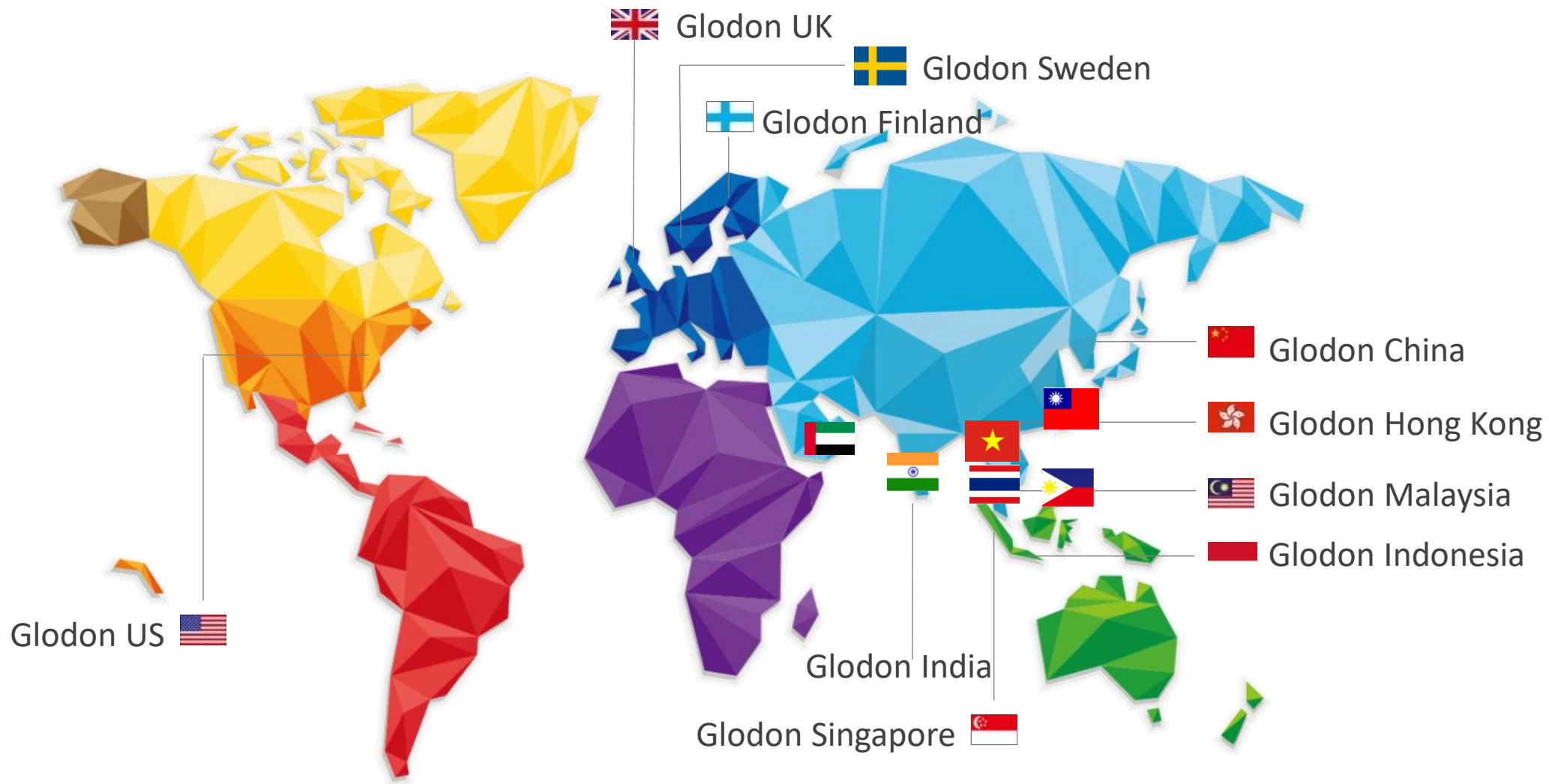


Company Overview



- **Glodon Software Limited (HQ), Beijing, China**
- Founded in 1998, Glodon was successfully listed in Shenzhen SME Board in May 2010
- Focus on AEC industry, provide professional application, Industry big data and Industrial finance for our customers (SZ SME: 002410)
- Currently the 5th biggest AEC software provider in the world
- Glodon started the process of globalization from 2009 to radiate the Southeast Asian, European and American markets

Globalized Layout



cubiCOST[®]



CUBICOST TAS



CUBICOST TRB

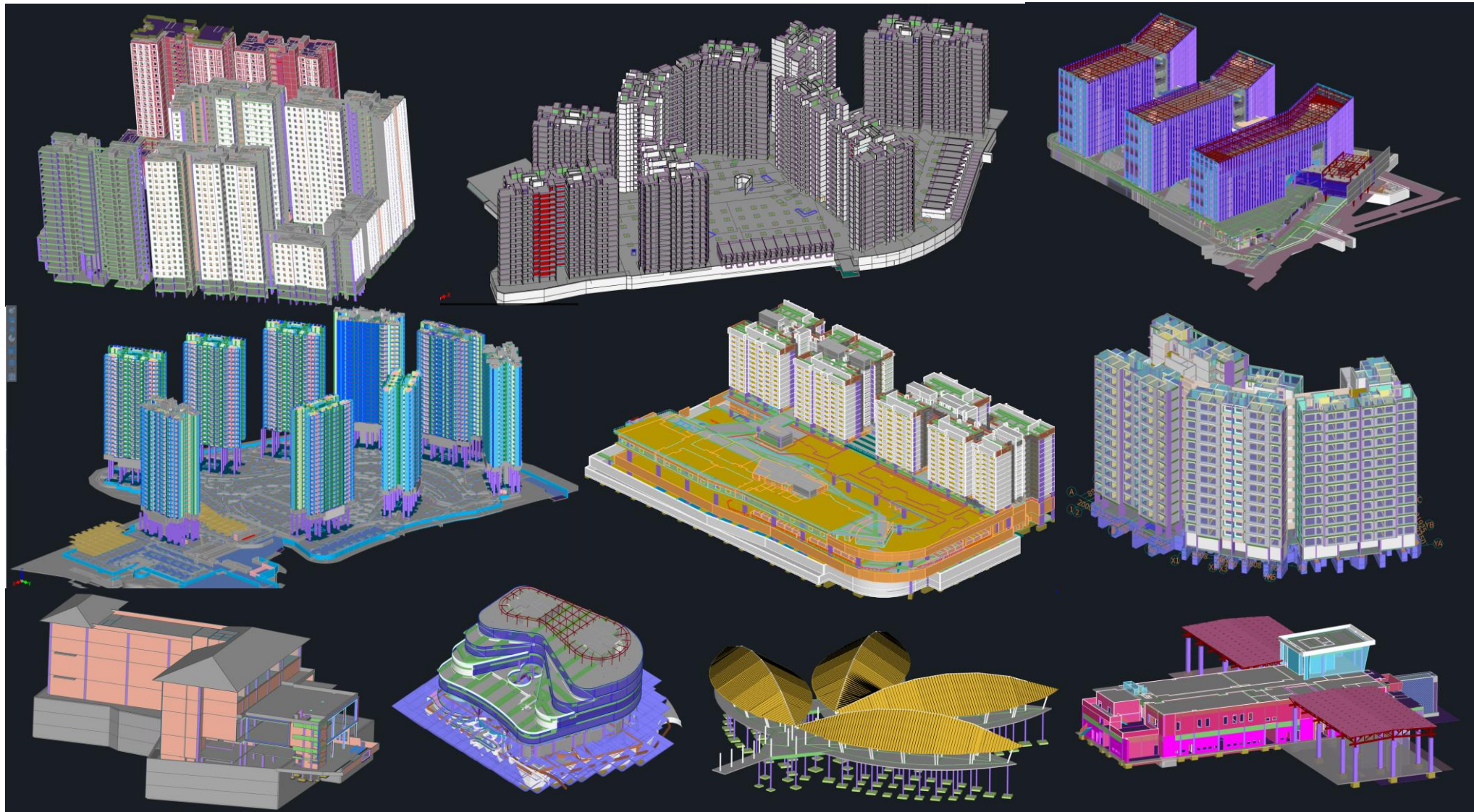


CUBICOST TME



CUBICOST TBQ

Case Studies





MOHON MENGISI ABSEN DI KOLOM CHAT



Cubicost TAS C Training

Training Arrangement

1st Day (TAS)

Foundation Floor

Introduction & Interface
Model Preparation
Project Settings
Import Drawings
Pile Cap

Raft Foundation

Slab
Tie Beams
Column
Basement Wall
Shear Wall
Beam typical floor
Slab typical floor

2nd Day (TAS) Typical Floor

Concrete Quantity
Measurement Rule for Concrete
Masonry Walls, Curtain Walls, & Railing
Separation Line
Door/Window opening

Room
Drop Ceiling
Segmentation
Revision
Calculation Result
Measurement Setting & Report

3rd Day (TRB) Reinforcement

Export TRB & Import in TAS
Drawings Preparation
Pile Cap Rebar
Raft Foundation Rebar
Column Rebar

Beam Rebar
Slab Rebar
RC Wall Rebar
Shear wall Rebar
Calculate & View Quantity



PERSONAL CERTIFICATE

Basic Level (2 years)

Certificate is awarded to users who have basic knowledge of the software operation.

Intermediate Level (2 years)

Certificate is awarded to users who are capable of applying software to do actual project.

Proficient Level (2 years)

Certificate is awarded to users who are capable of extensive software operations and have enough knowledge of BIM technology.

Expert Level (5 years)

Certificate is awarded to users who are capable to optimize the full functionality of the respective software.

1. The certificate will only be issued by Glodon branches or our partner institutions.
2. Glodon Cubicost Certificate only proves that you have the ability to operate Cubicost BIM Software , but does not represent any other BIM software.
3. The certificate is effective during the validity period. When it expires, you need to take the assessment and regain the certificate.
4. Glodon Software Company Limited reserves all the right to make any decision on certification and any explanation on the terms and conditions.

Training Certificate



don 广联达

Training Materials

Training Slides & Drawings

bit.ly/basictrainingglodon

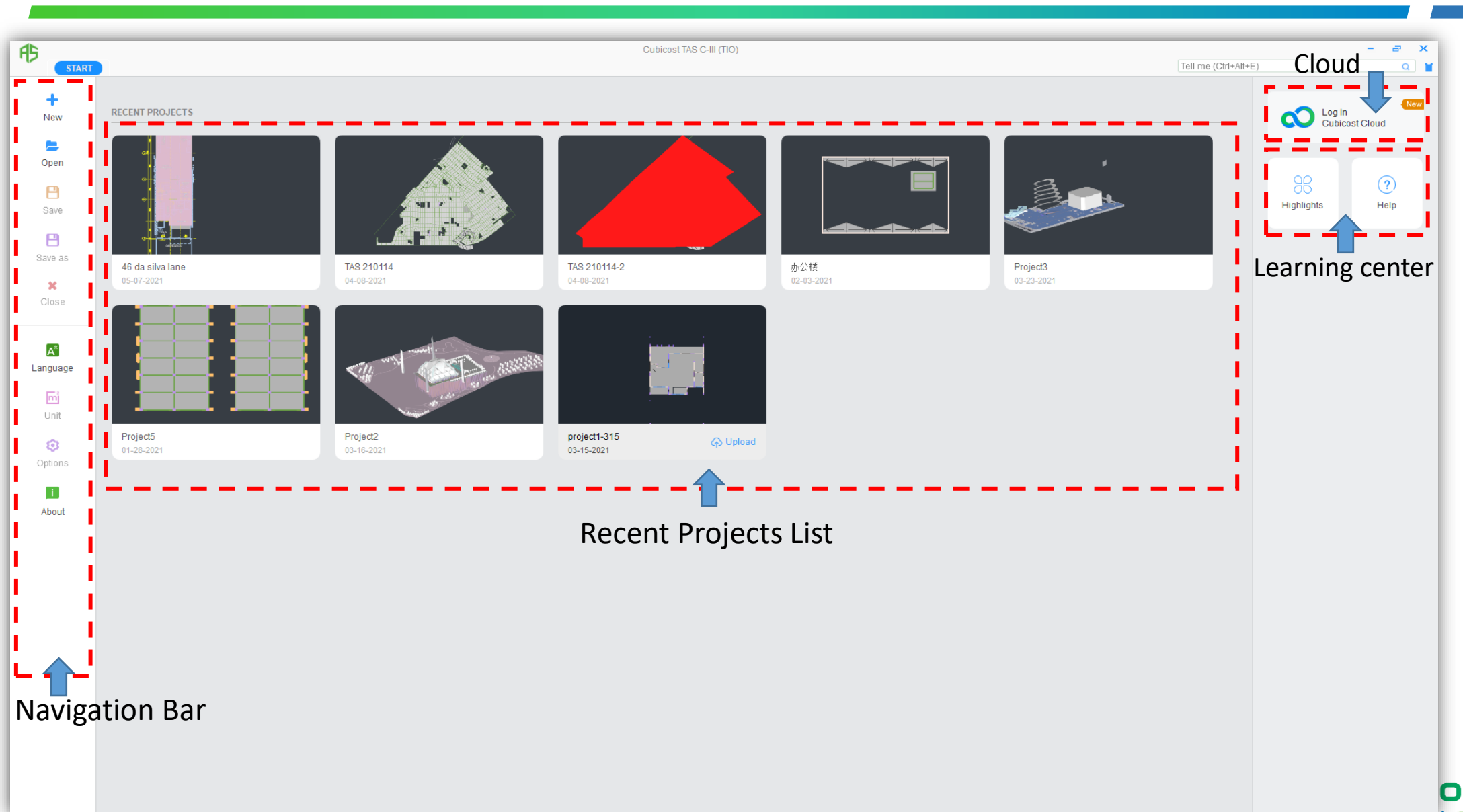


E-learning Platform

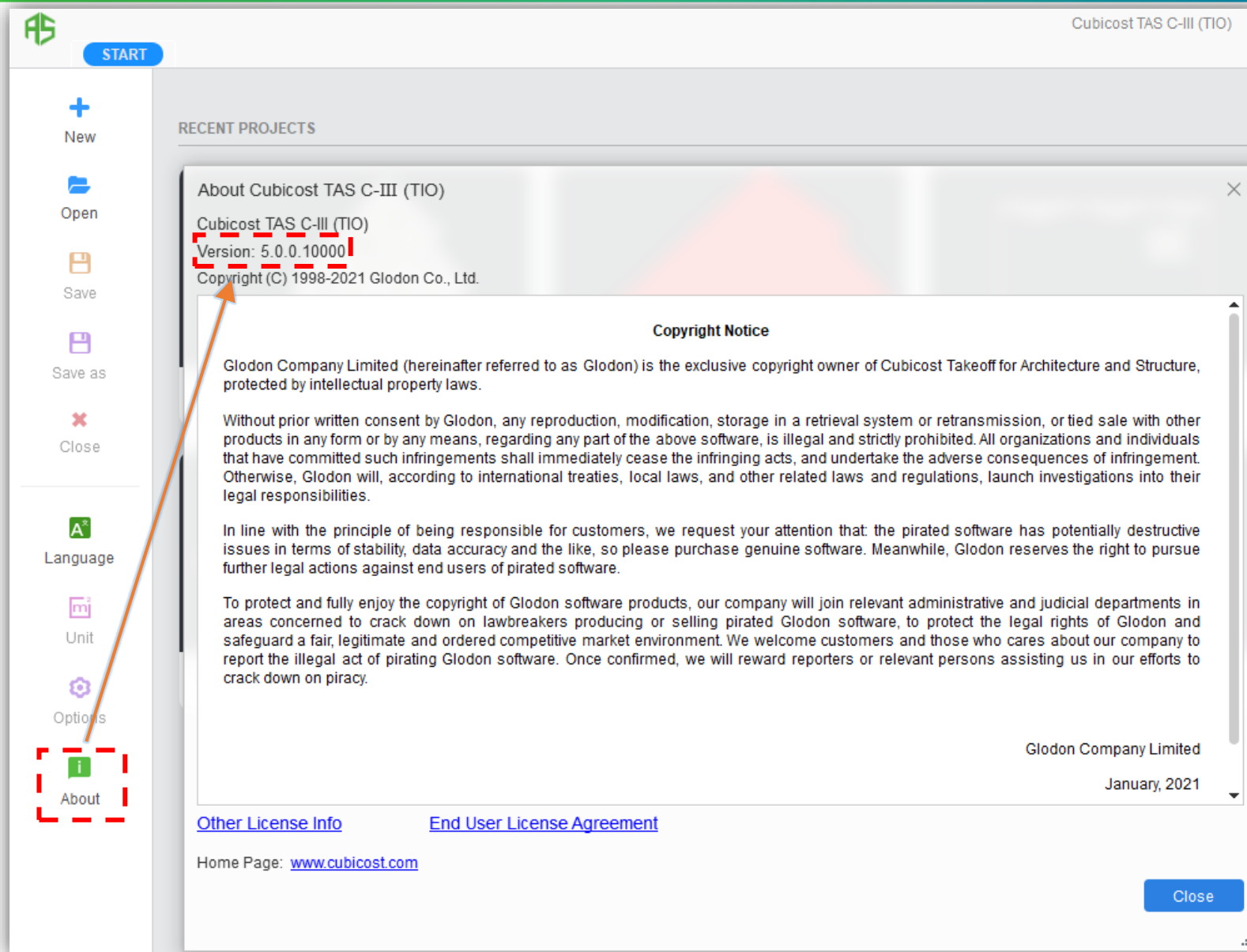
glodon-trainings.teachable.com/p/id



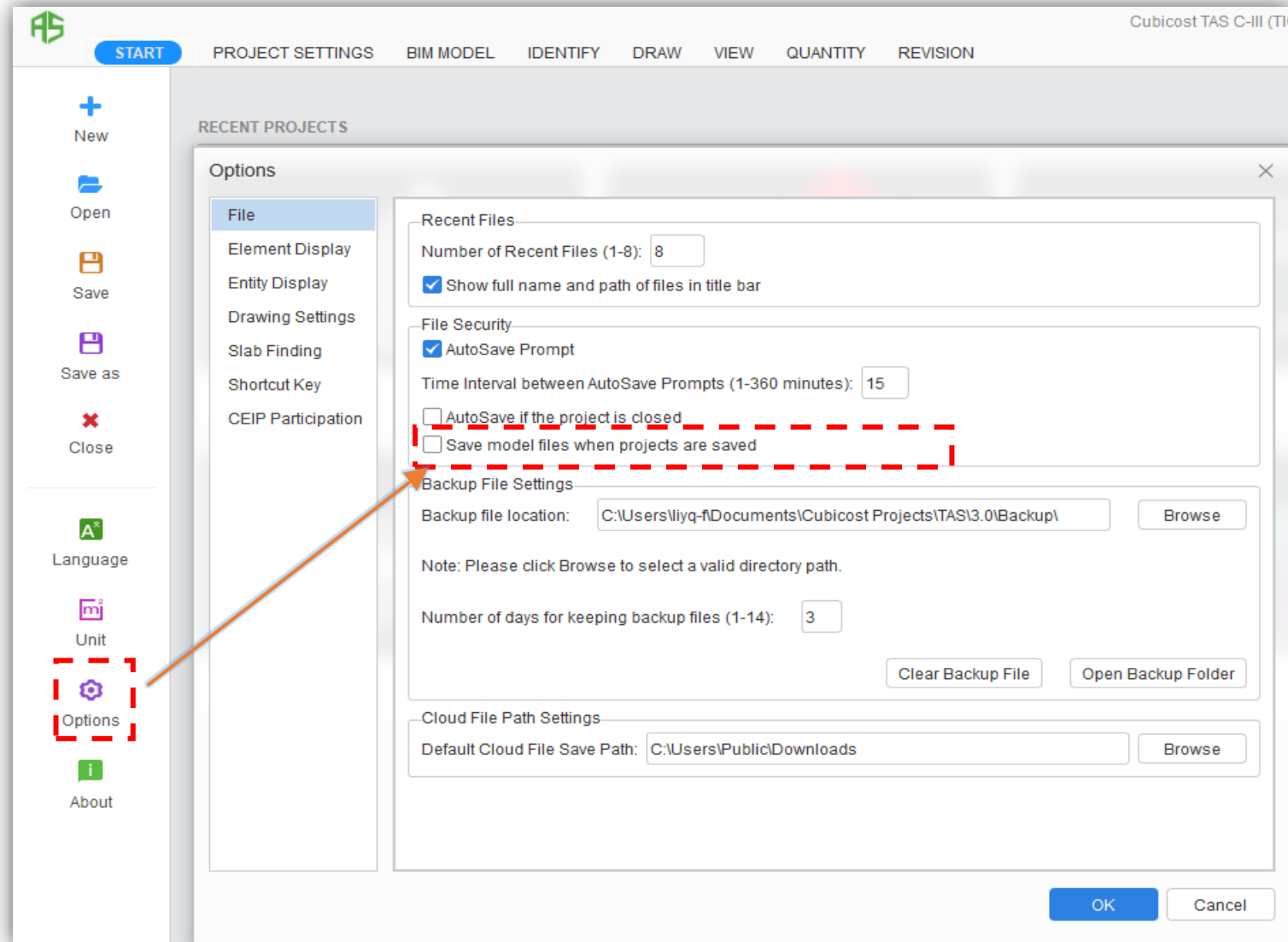
0.0 Welcome Interface



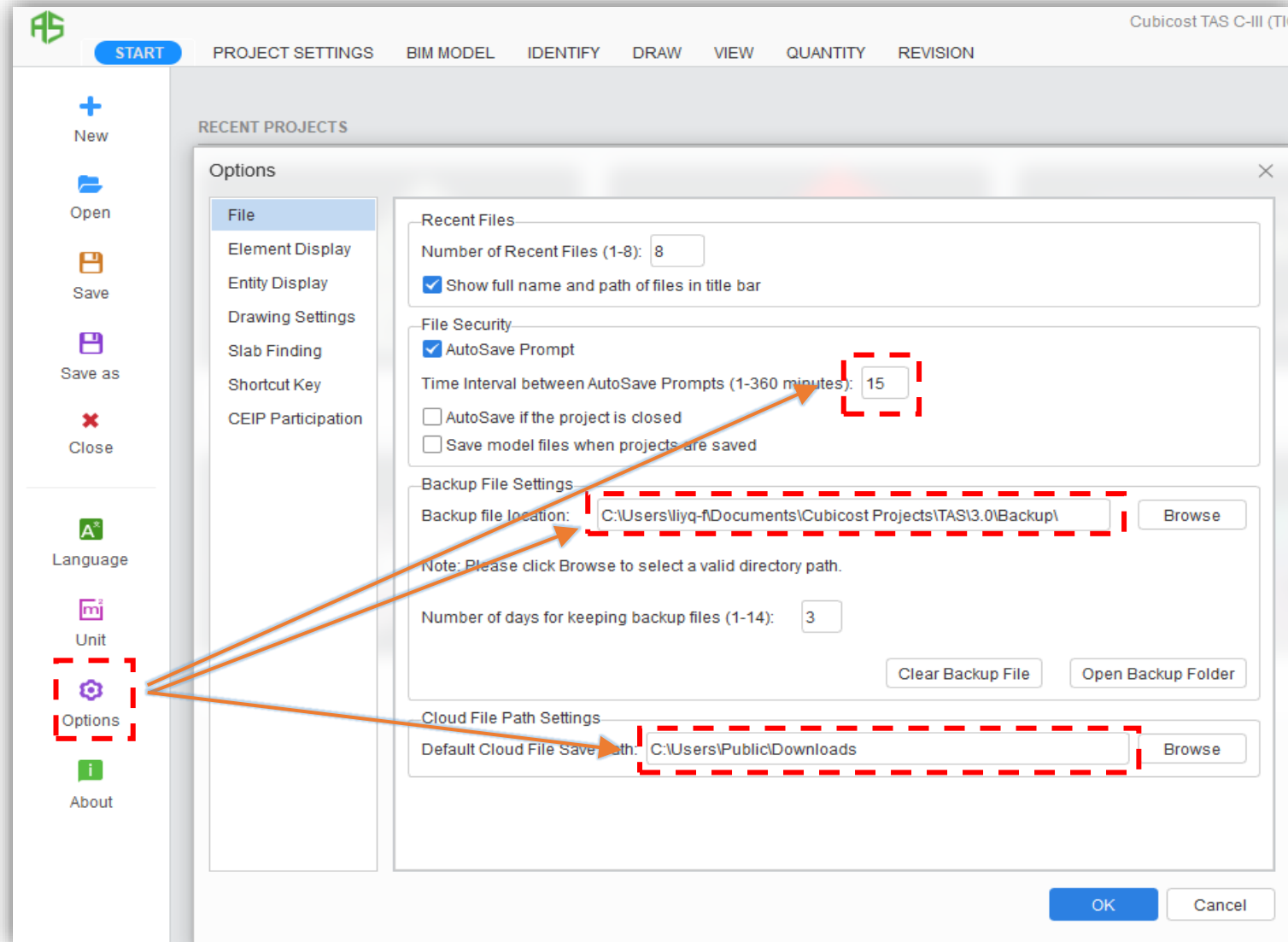
0.0 Welcome Interface



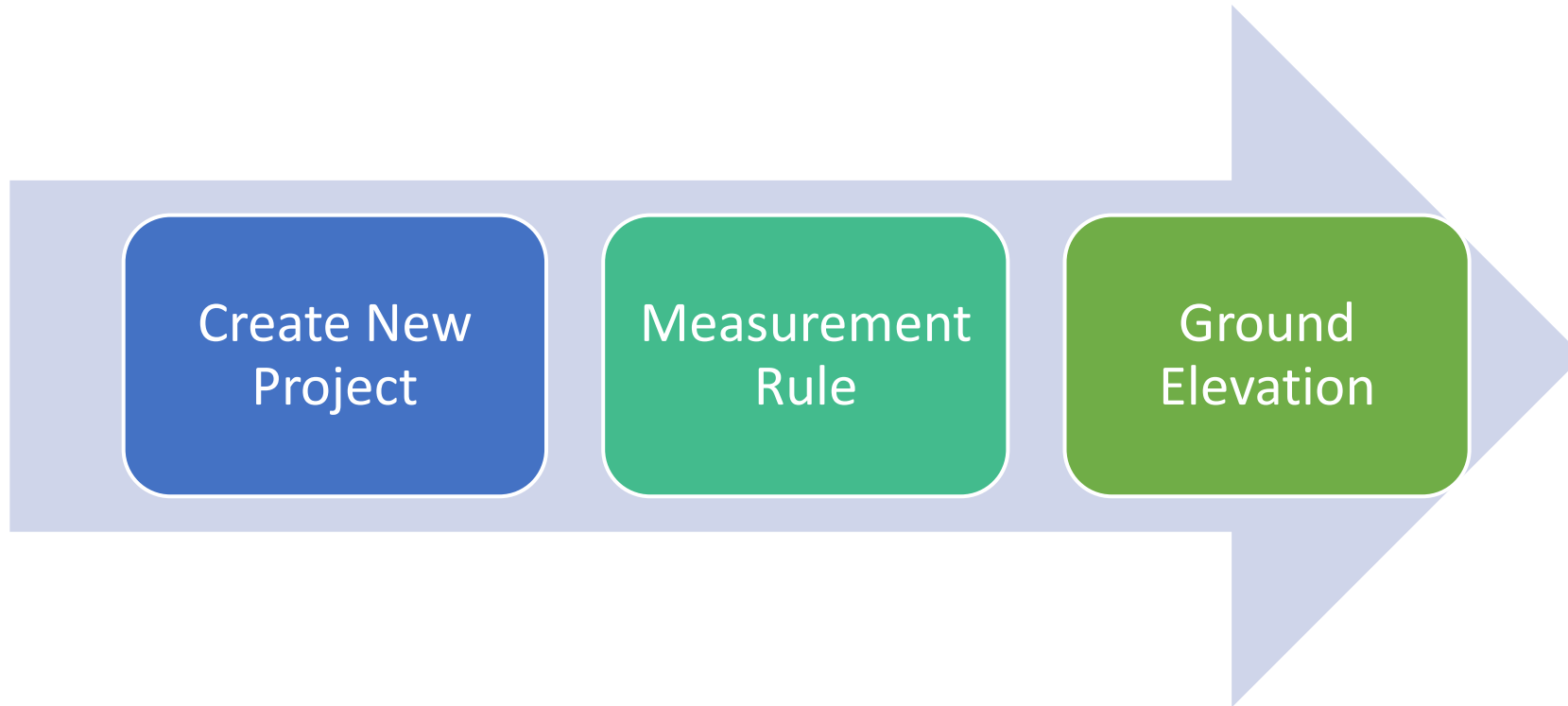
0.0 Welcome Interface



0.0 Welcome Interface



1.0 Create Project



1.0a Create New Project

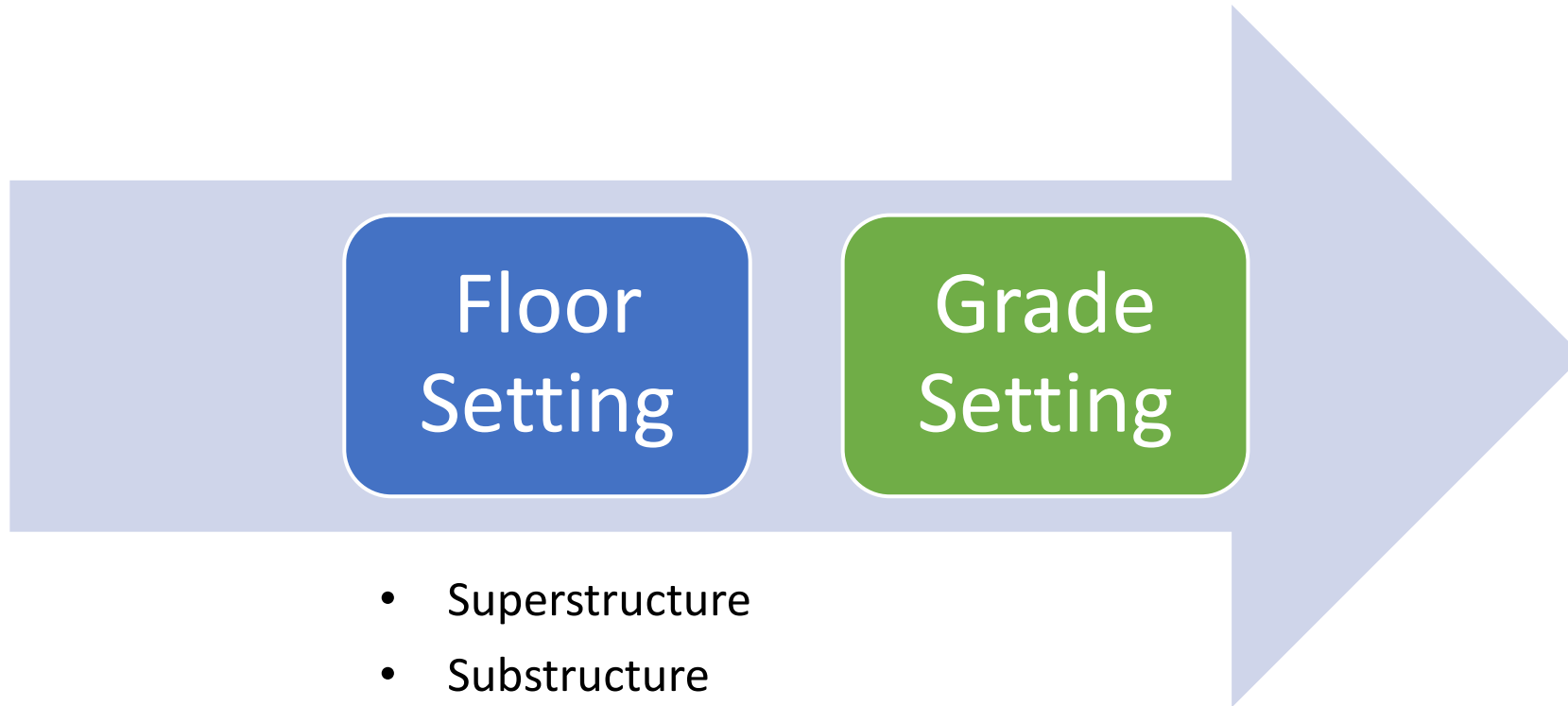
- Step 1: Create a [New] Project
- Step 2: Input Project Title
- Step 3: Select [Measurement Rules]
- Step 4: Input Existing Ground Level

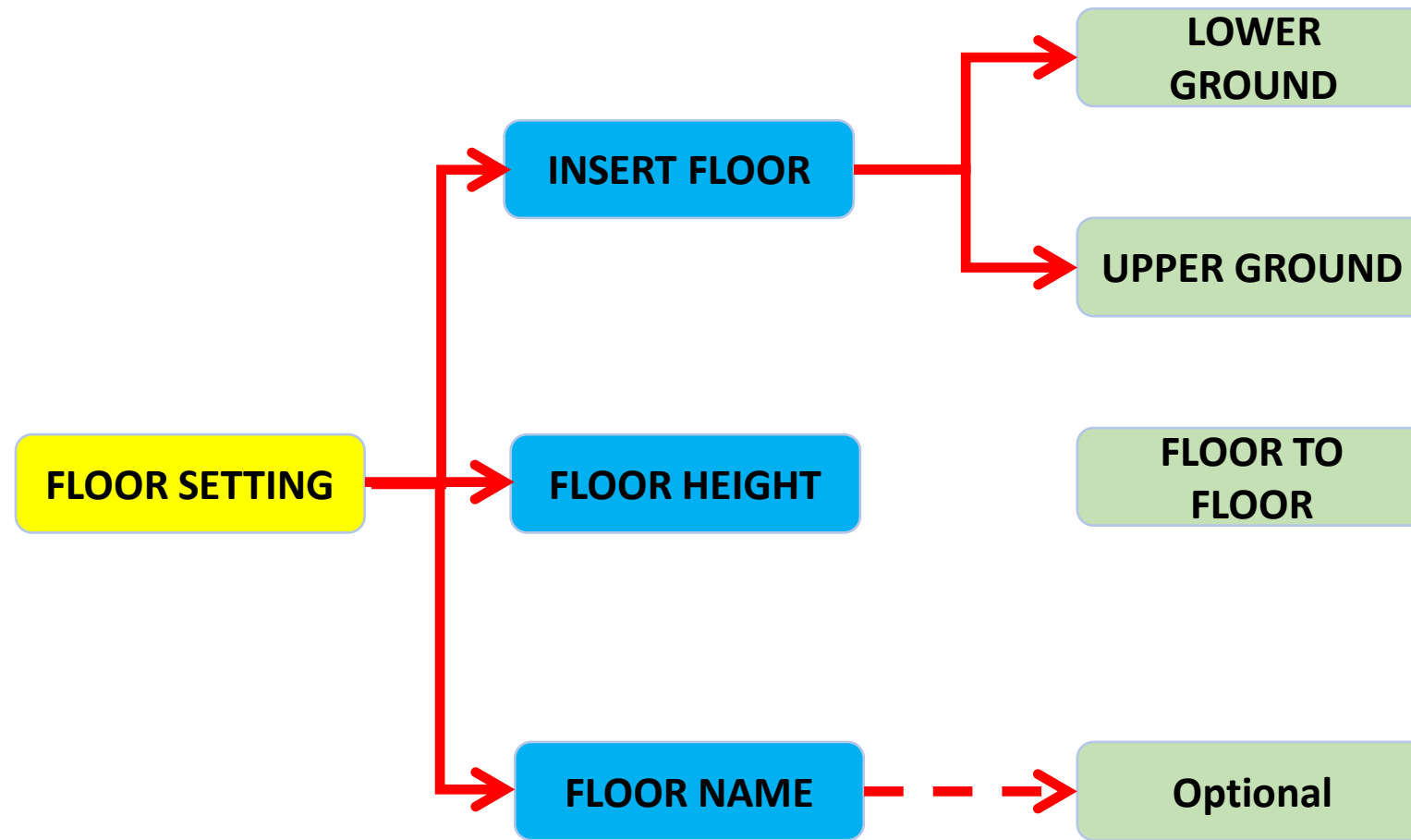
The screenshot shows the 'New Project' dialog box with the following elements and annotations:

- Step 1:** A green circle with the number '1' is placed over the 'New' button in the left sidebar.
- Step 2:** A green circle with the number '2' is placed over the 'Project2' text input field.
- Step 3:** A green circle with the number '3' is placed over the 'Please select a measurement rule' dropdown menu.
- Step 4:** A green circle with the number '4' is placed over the '0.000' text input field for 'Ground Elevation (m)'.

Below the input fields, there is a tip: **Tips: This will affect the quantity of excavation*. The dialog box also includes a 'Close' button in the sidebar and an 'OK' button at the bottom right.

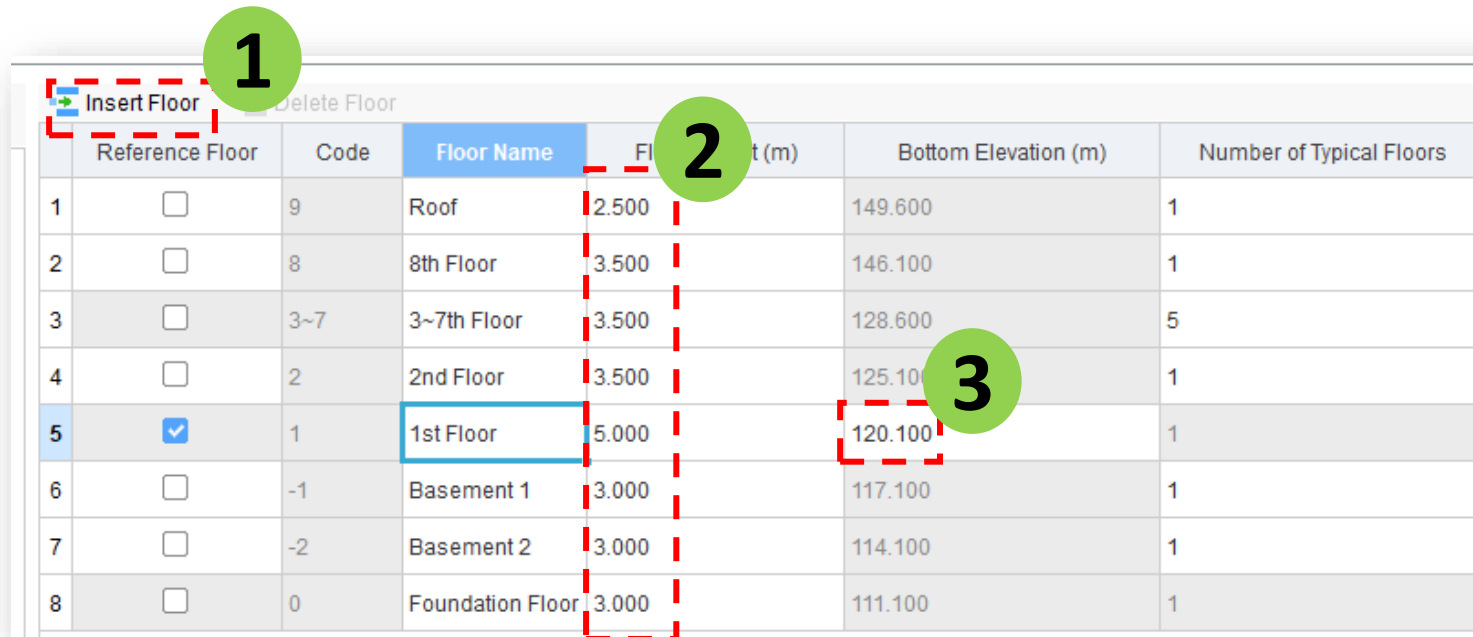
2.0 Project Setting





2.0b Floor Setting

- **Step 1:** (a) Select at 1st Floor and **[Insert Floor]** for superstructure
(b) Select at Foundation Floor and **[Insert Floor]** for substructure
- **Step 2:** Input **[Floor Height]** of every floors
- **Step 3:** Input the **[Bottom Elevation]** of 1st Floor ONLY



	Reference Floor	Code	Floor Name	Floor Height (m)	Bottom Elevation (m)	Number of Typical Floors
1	☐	9	Roof	2.500	149.600	1
2	☐	8	8th Floor	3.500	146.100	1
3	☐	3~7	3~7th Floor	3.500	128.600	5
4	☐	2	2nd Floor	3.500	125.100	1
5	☒	1	1st Floor	5.000	120.100	1
6	☐	-1	Basement 1	3.000	117.100	1
7	☐	-2	Basement 2	3.000	114.100	1
8	☐	0	Foundation Floor	3.000	111.100	1

2.0c Grade Setting

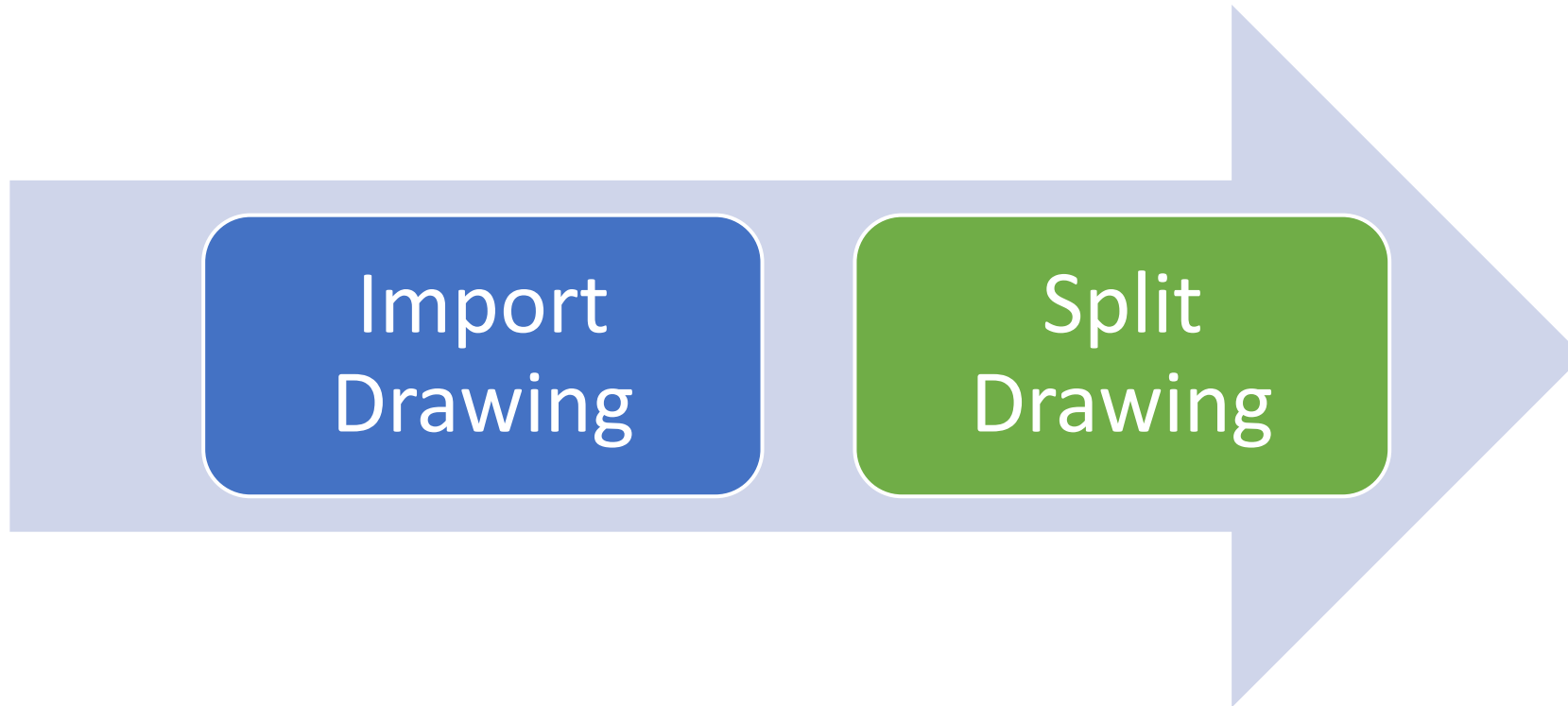
- Step 1: Input [Concrete Grade] of different elements
- Step 2: [Copy to Other Floor] if the grading is same with certain floor(s)

Grade Settings [Current Floor: 1st Floor, 5,600 - 5,700]

	Element Type	Concrete Grade	Concrete Category	Formwork Type	Mortar Grade	Mortar Category	Steel Ratio (kg/m3)
1	Foundation	20.00	Common Concrete	Common Formwork	M10	Cement Mortar	50.000
2	Blinding	10.00	Common Concrete	Common Formwork			20.000
3	Concrete Wall	30.00	Common Concrete	Common Formwork			30.000
4	Beam	30.00	Common Concrete	Common Formwork			150.000
5	Column	30.00	Common Concrete	Common Formwork	M10	Cement Mortar	150.000
6	In-situ Slab	25.00	Common Concrete	Common Formwork			50.000
7	Staircase	20.00	Common Concrete	Common Formwork			80.000
8	Precast Components	30.00	Common Concrete				50.000
9	Stiffener	25.00	Common Concrete	Common Formwork			150.000
10	Ring Beam	20.00	Common Concrete	Common Formwork			150.000
11	Brick Wall				M10	Cement Mortar	0.000

Copy to Other Floor Restore Default

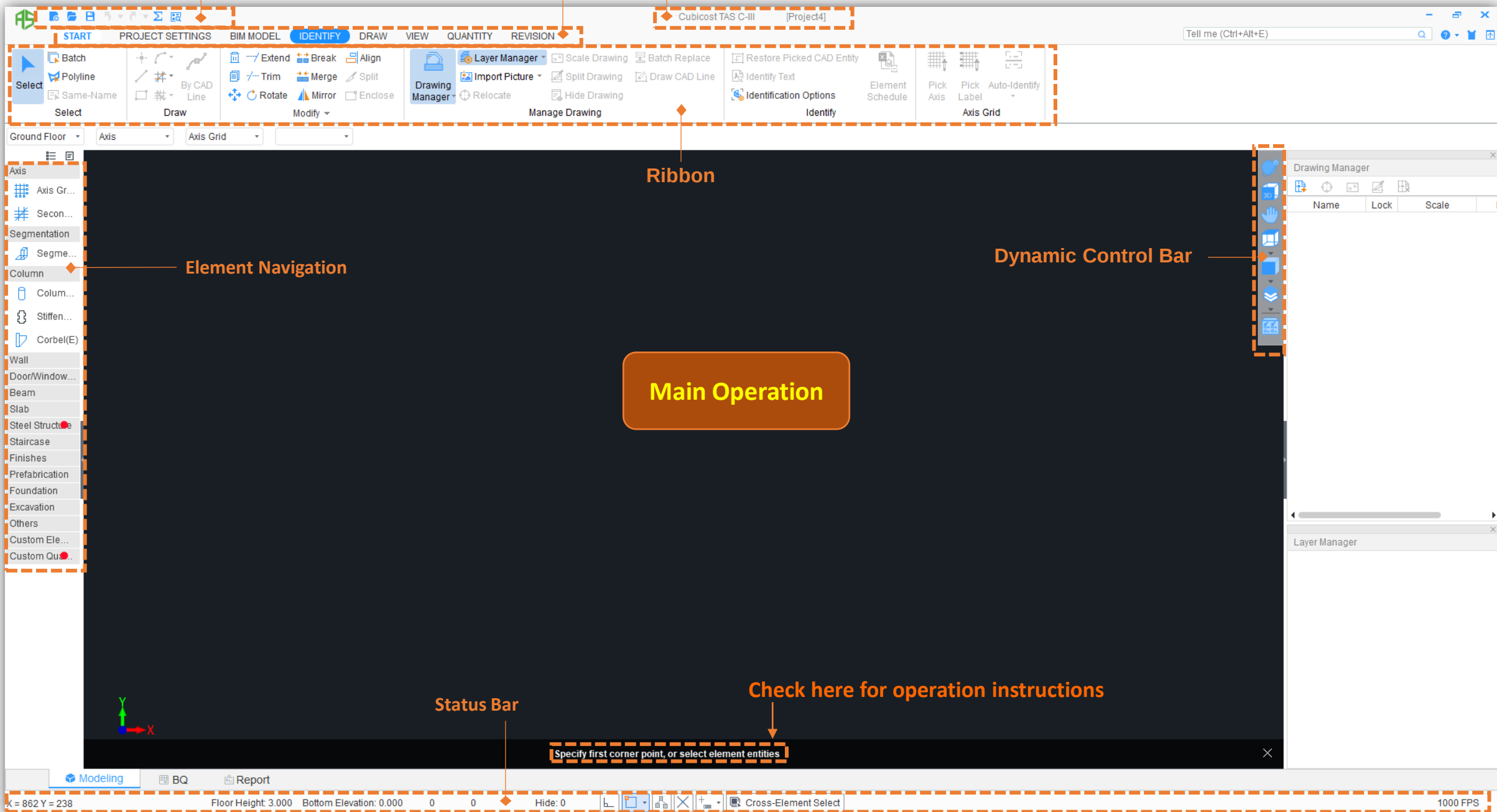
4.0 Drawing Management



Quick Access Toolbar

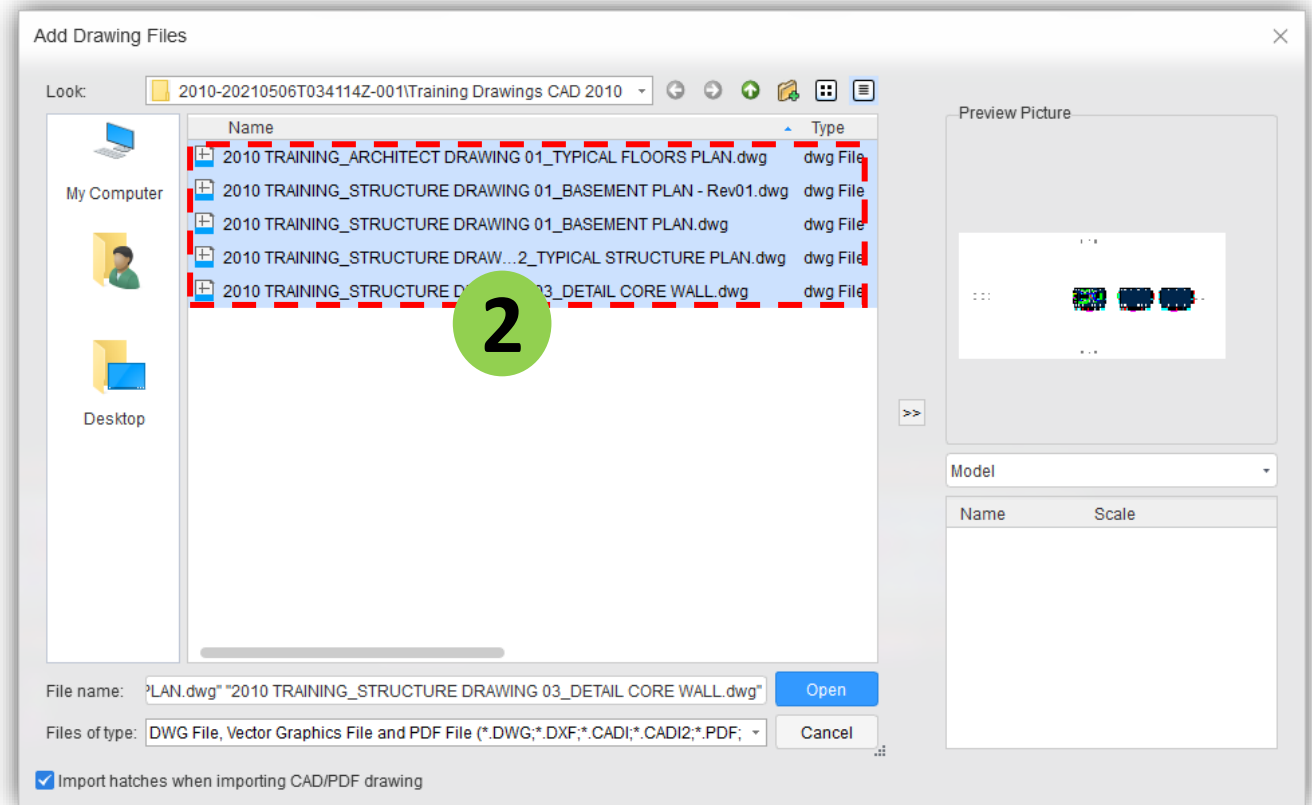
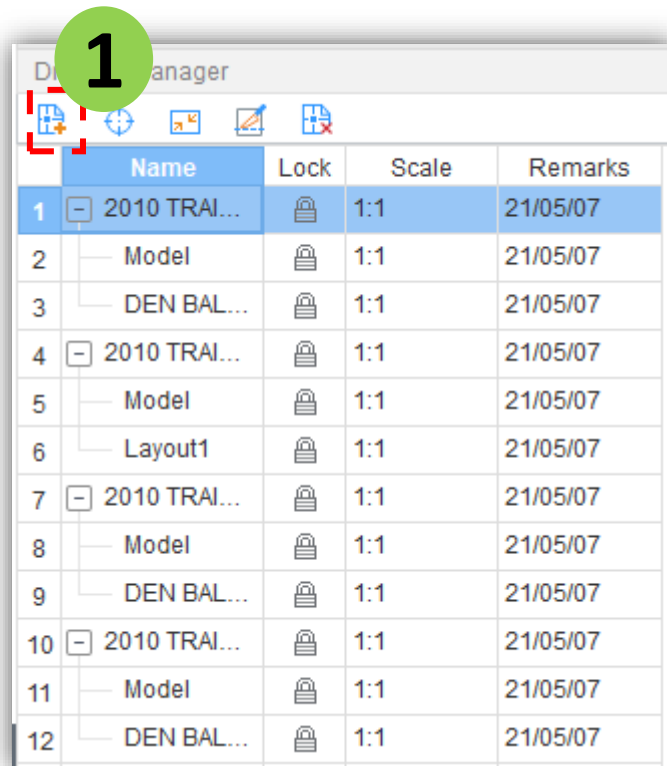
Function Tab

Application Name, Project Name



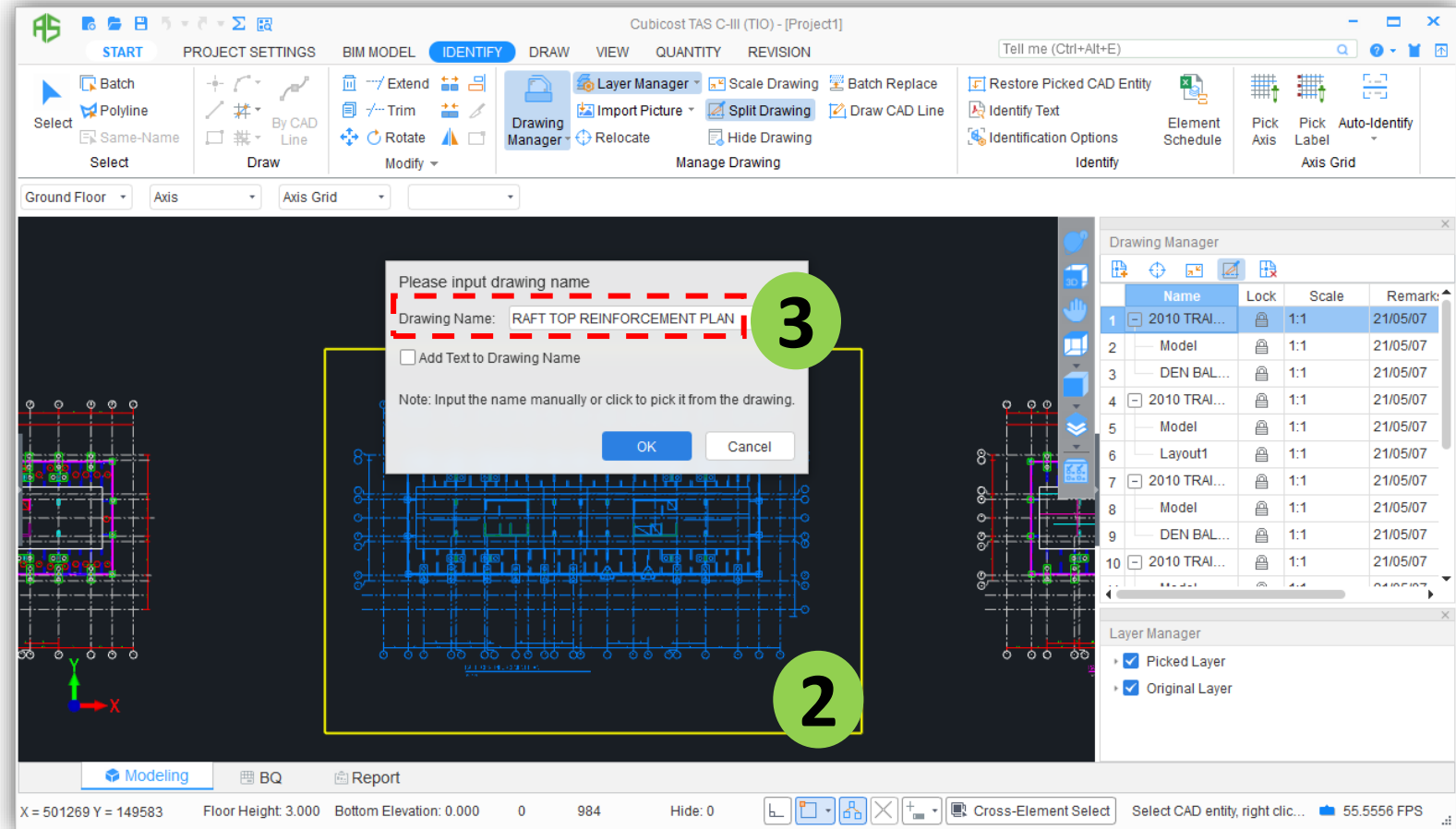
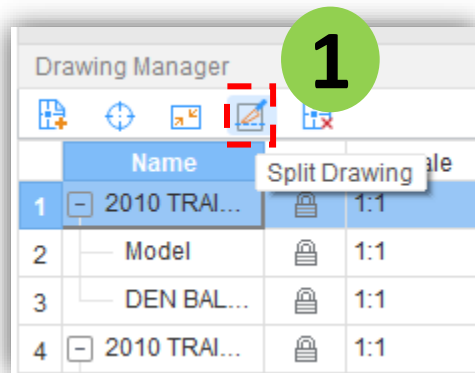
4.0a Import Drawing

- Step 1: Tab {Identify}, [Add] drawing(s)
- Step 2: Select Drawing(s)



4.0b Split Drawing

- **Step 1:** In the Drawing Manager, click **Split**
- **Step 2:** **Block select** CAD plan drawing, right click
- **Step 3:** **Input** drawing name by typing in the box or click on the drawing title



4.0 Drawing Compatible

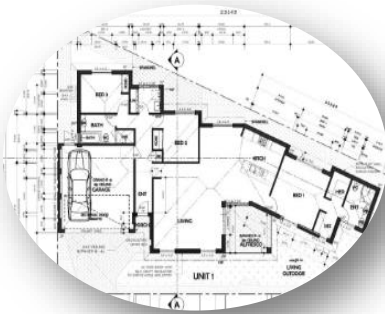


*.dwg



Recommend operate process:

- Import drawing(s);
- Split drawing(s)



Vector PDF/Scanned PDF

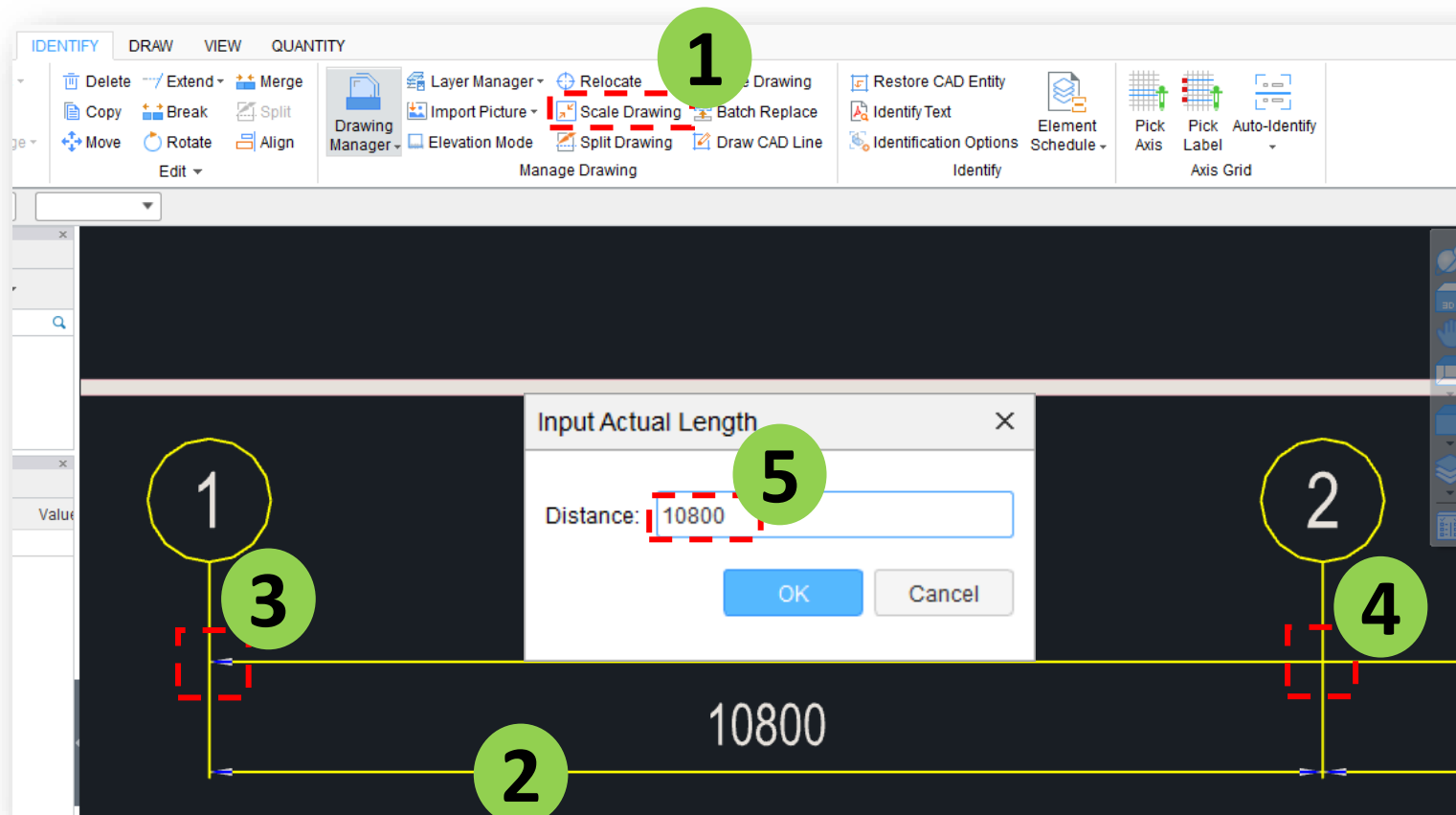


Recommend operate process:

- Import drawing(s);
- Split drawing(s);
- *Scale drawing(s)

4.0b Scale Drawing

- Step 1: Tab {Identify}, Click [Scale Drawing]
 - Step 2: Right Click on drawing
 - Step 3: Specific Start point
 - Step 4: Specific End point
 - Step 5: Input Actual Length
- * Tips: The longest distance = accuracy



Point Type



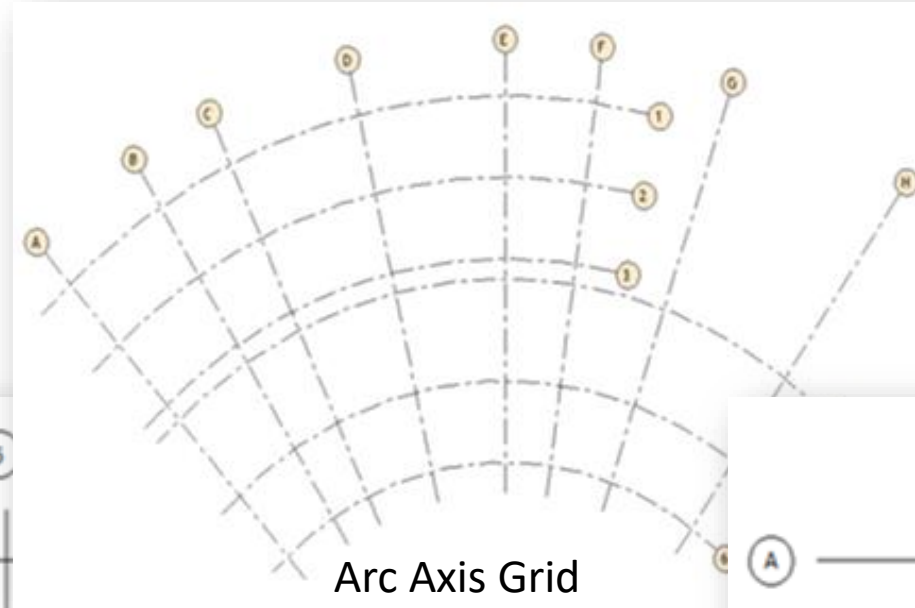
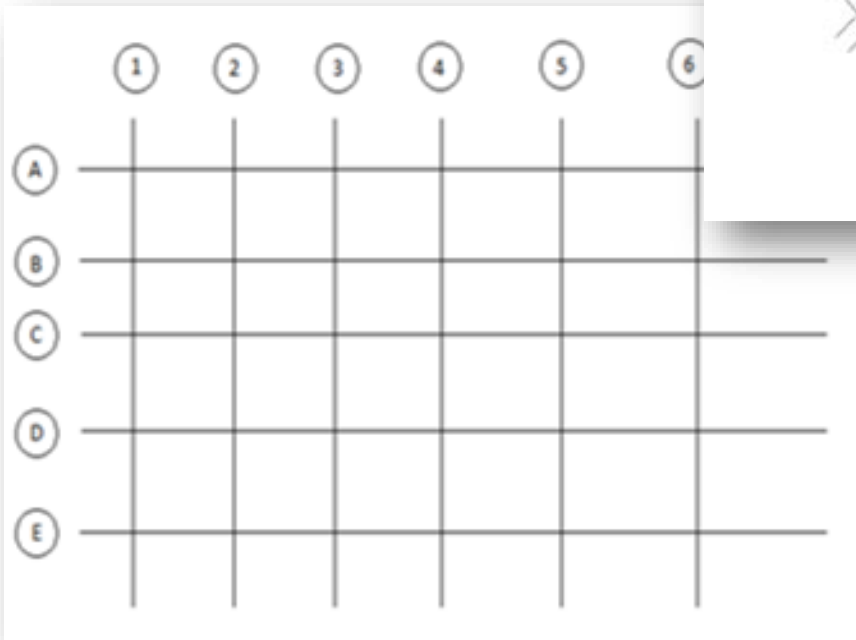
Axis Grid



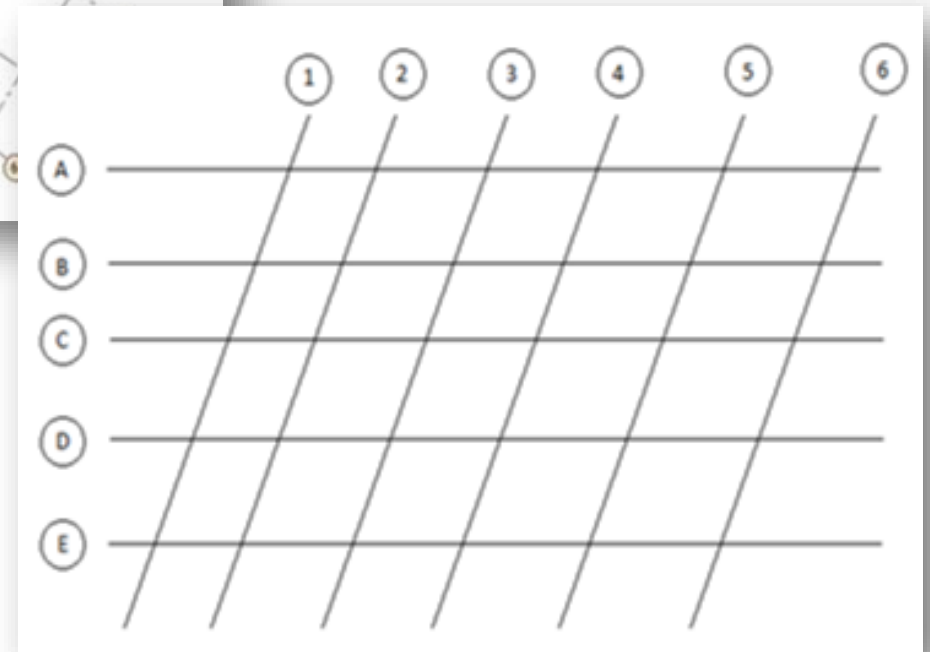
Type of Axis

- Type of Axis

Orthogonal Axis Grid



Diagonal Axis Grid



4.0 Axis

Auto-Identify

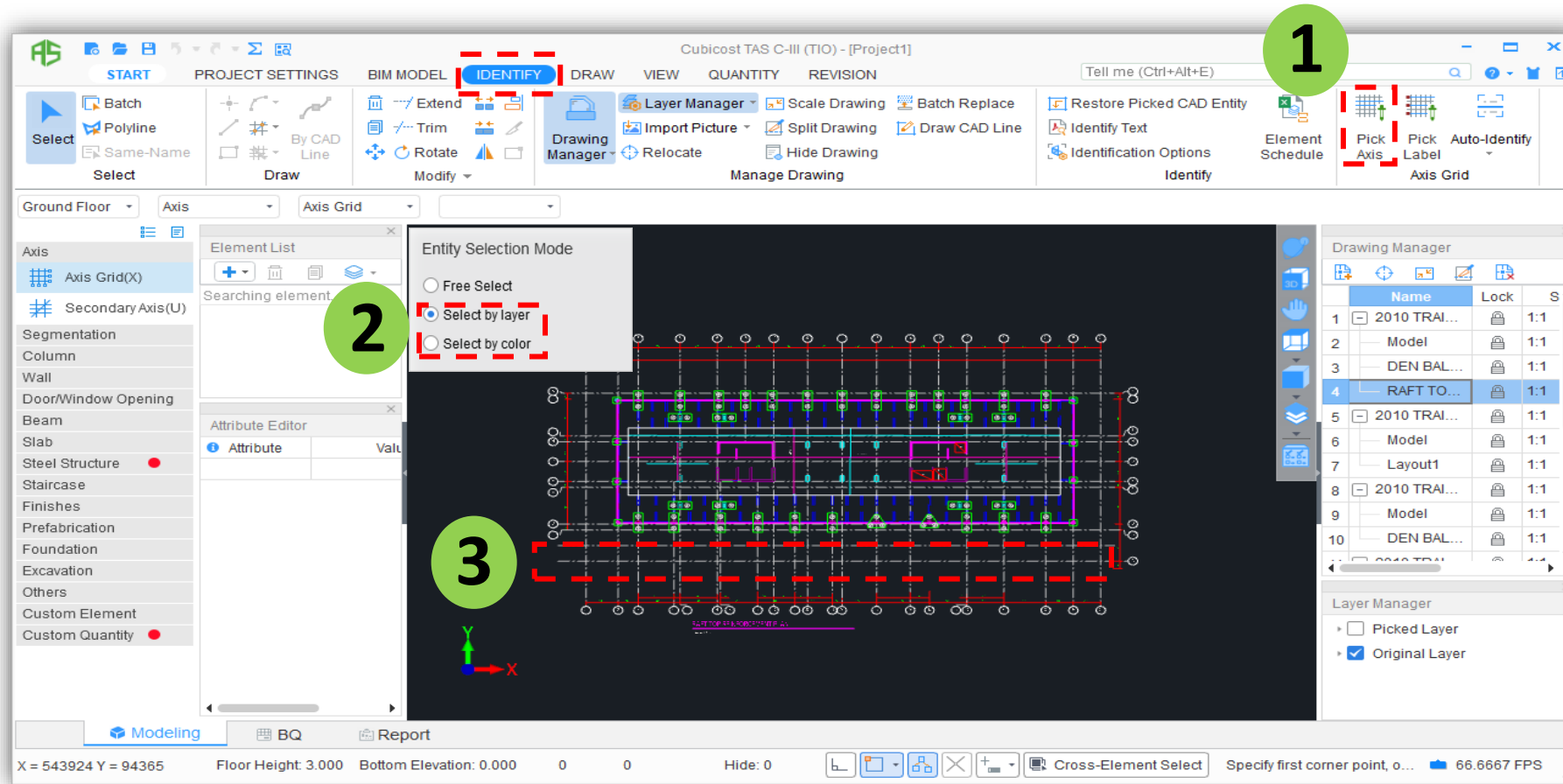
- Pick Sideline
- Pick Label
- Auto Identify

Manual

- New axis
- Input axis label & distance for each side
- Point the axis location

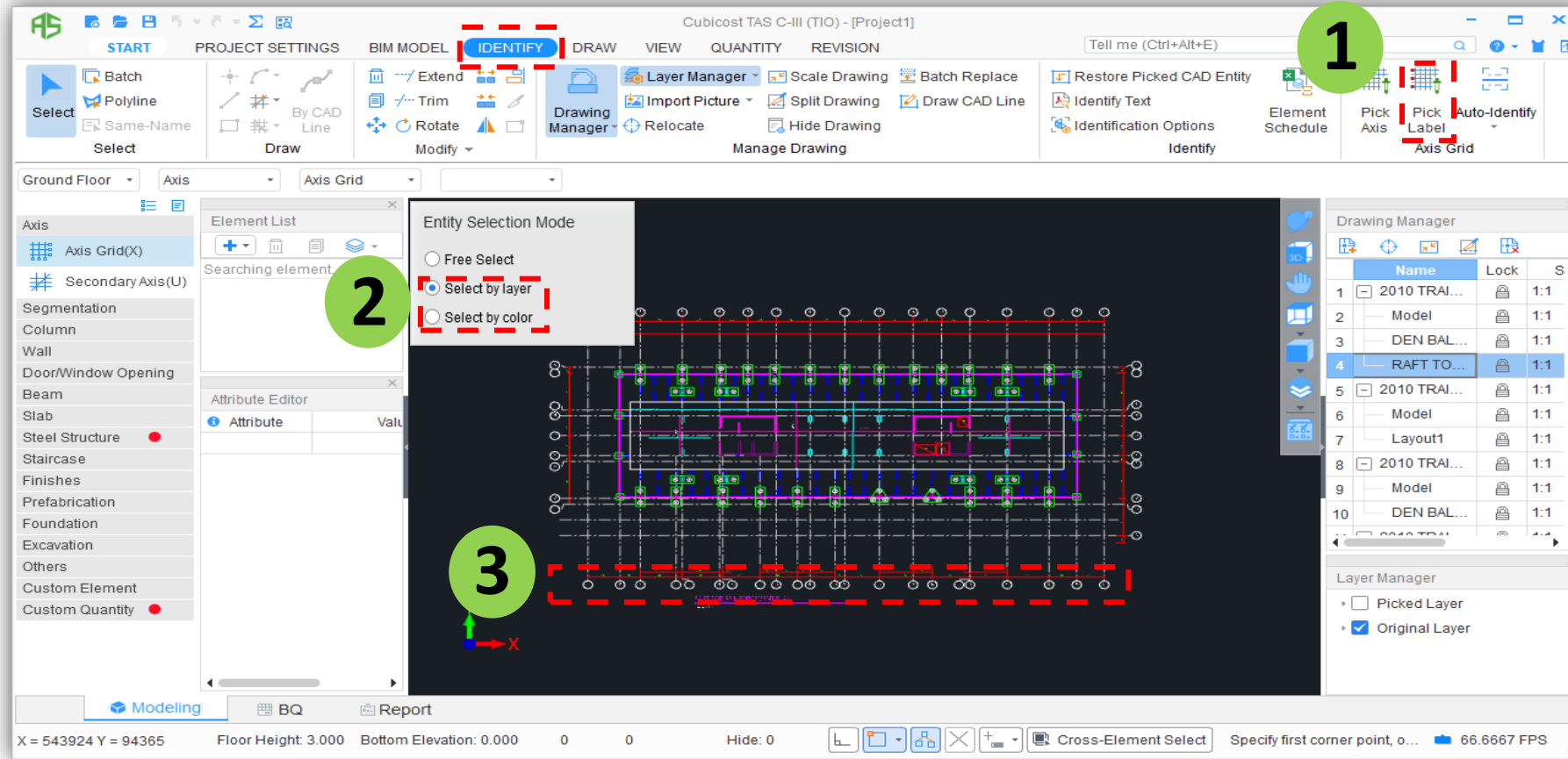
4.0 Axis (Auto-Identify) – Pick Sideline

- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by color]
- Step 3: Pick the side line of axis & right click



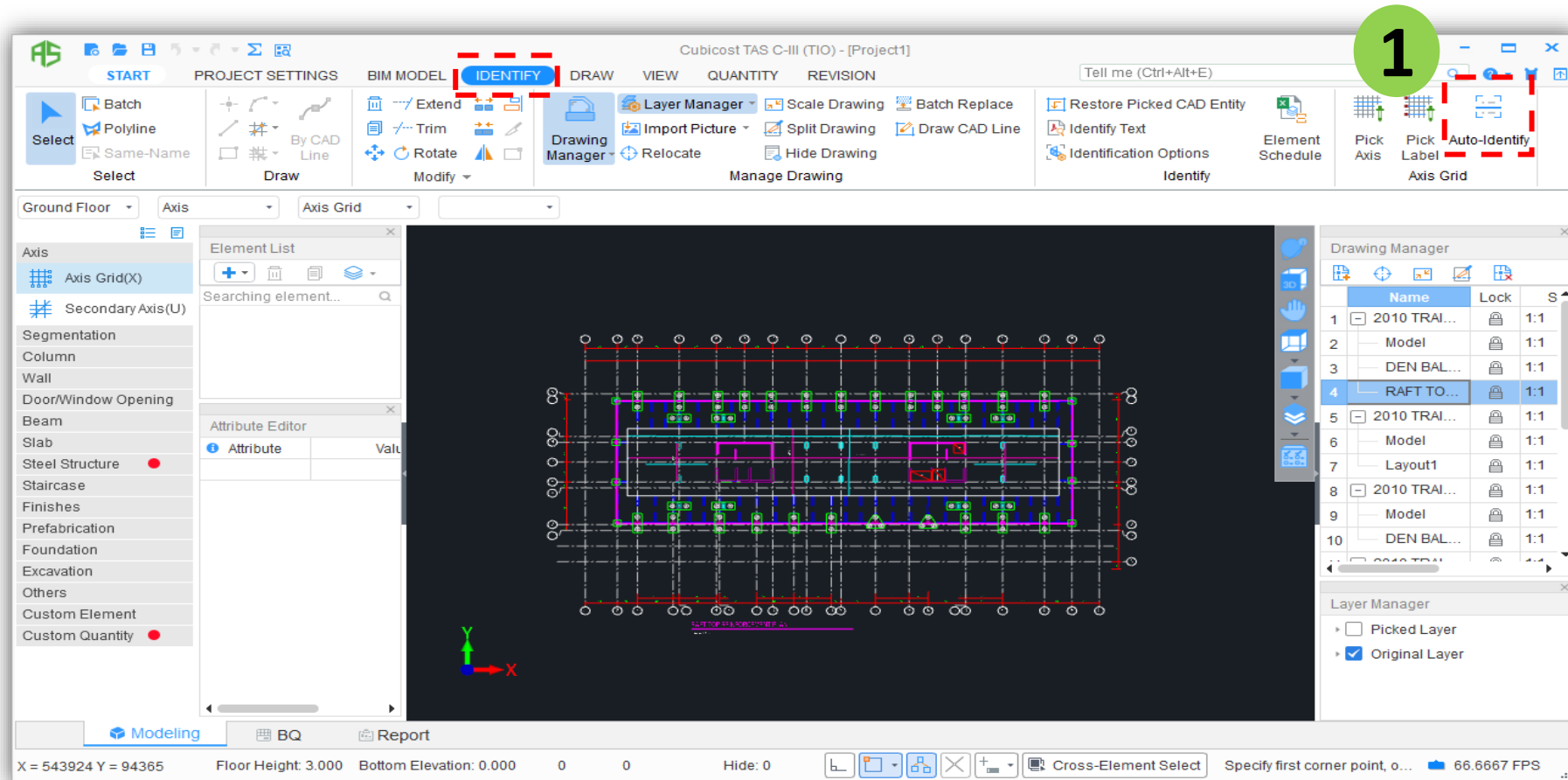
4.0 Axis (Auto-Identify) – Pick Sideline

- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by color]
- Step 3: Pick the Label of axis & right click

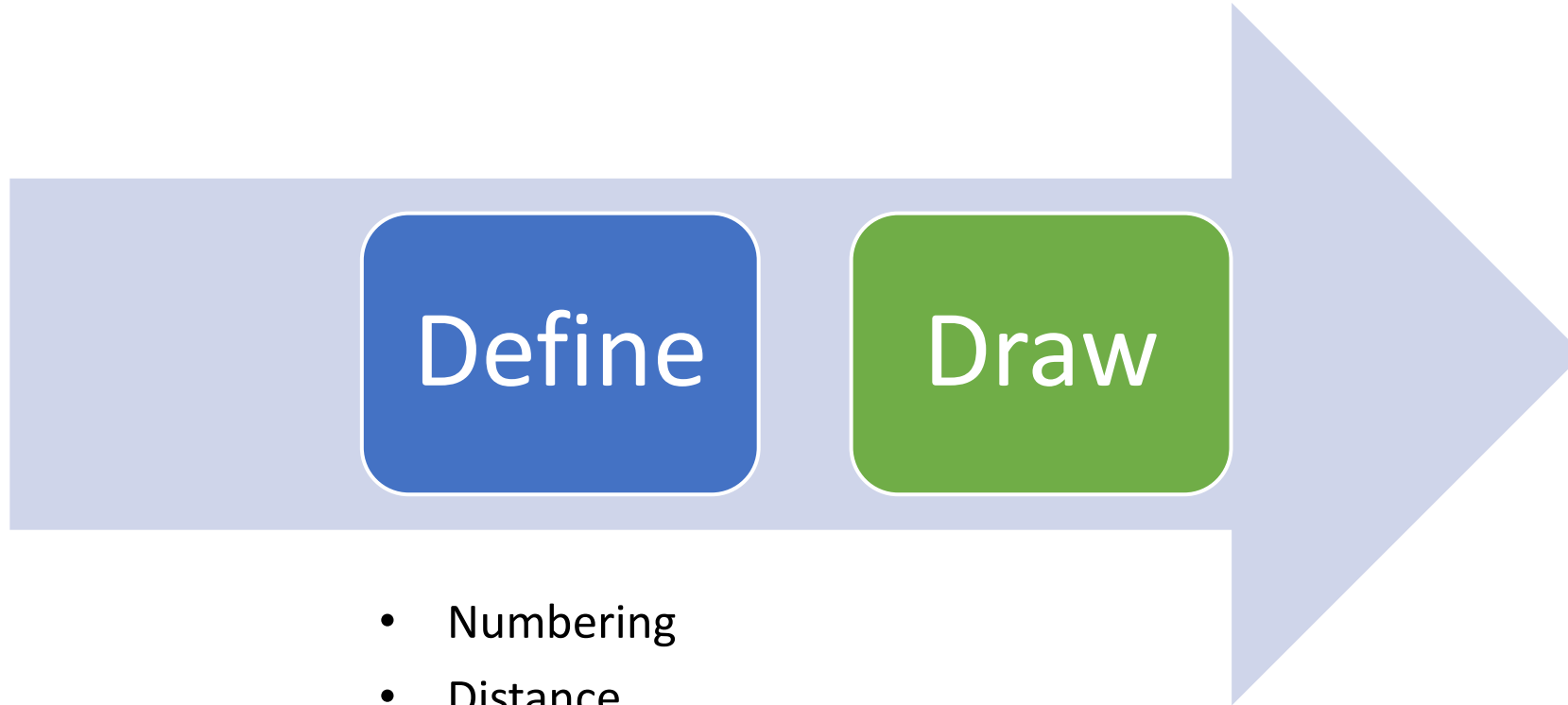


4.0 Axis (Auto-Identify) – Auto-Identify

- Step 1: Tab {Identify}, Select [Auto -Identify]



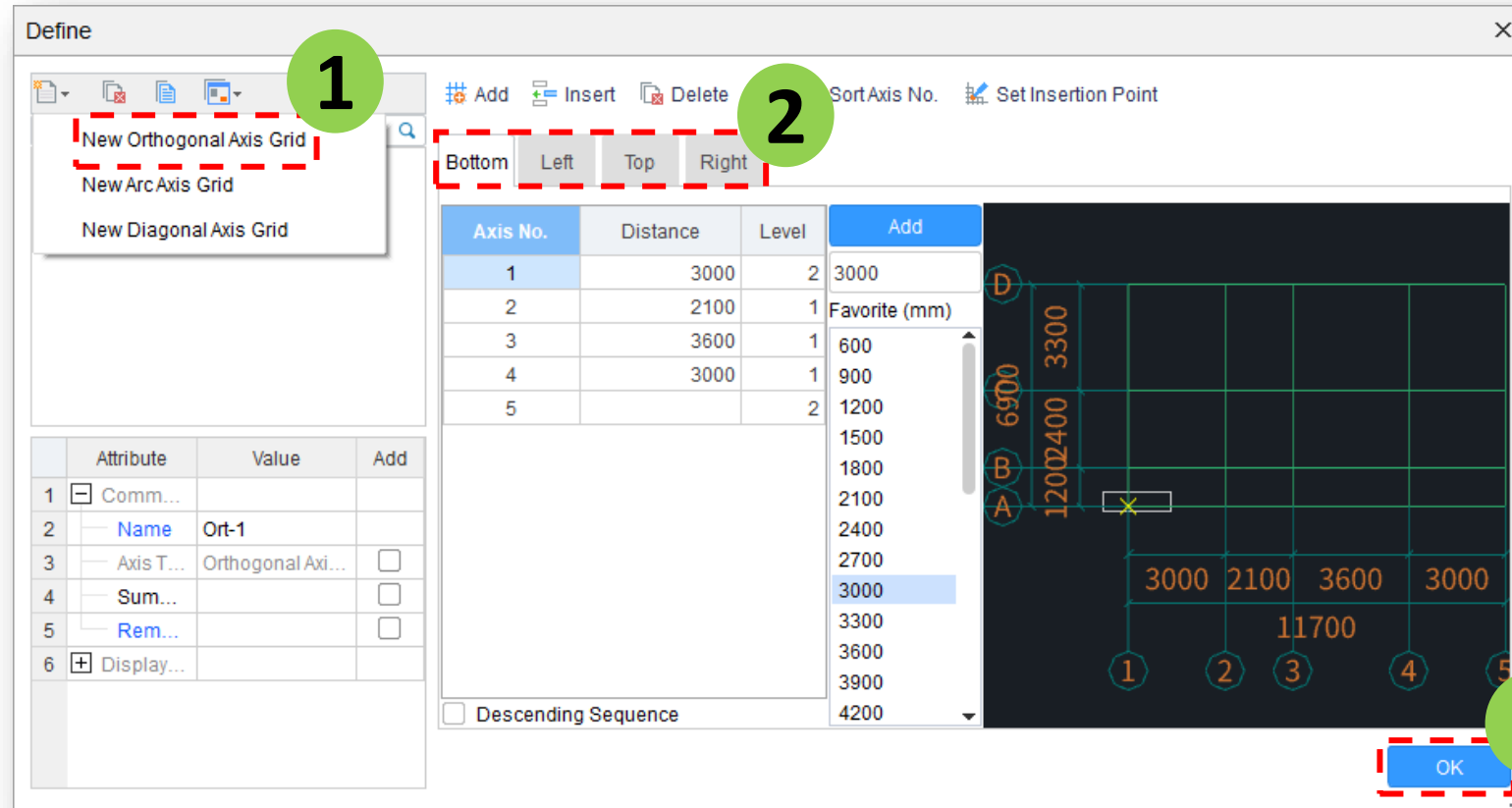
3.0 Axis (Manual)



- Numbering
- Distance

3.0a Define Axis

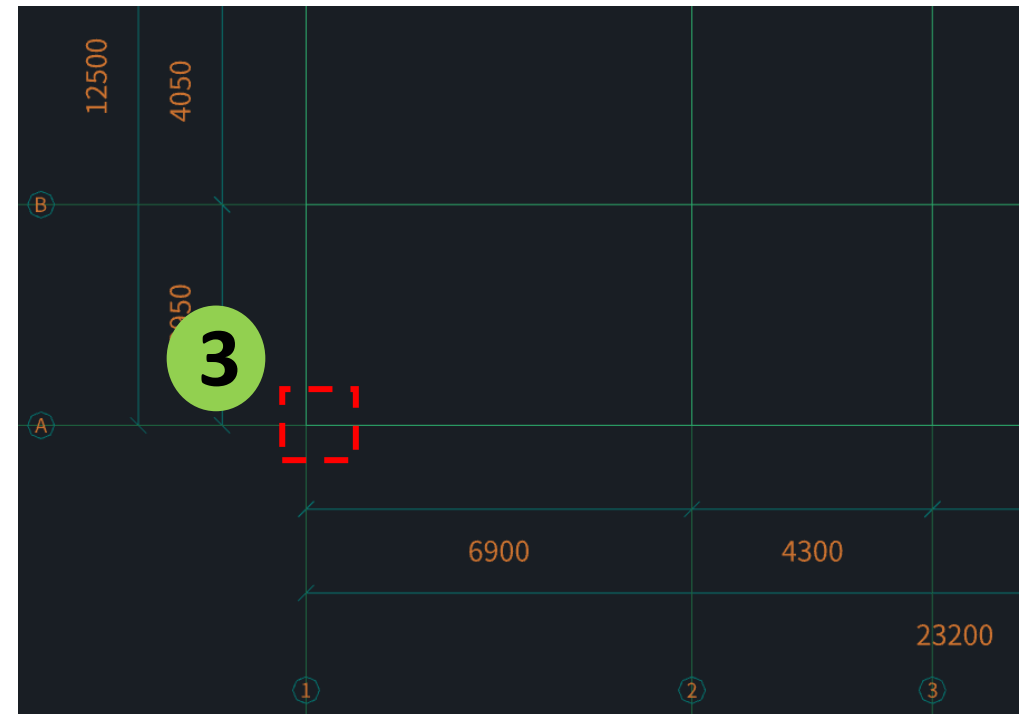
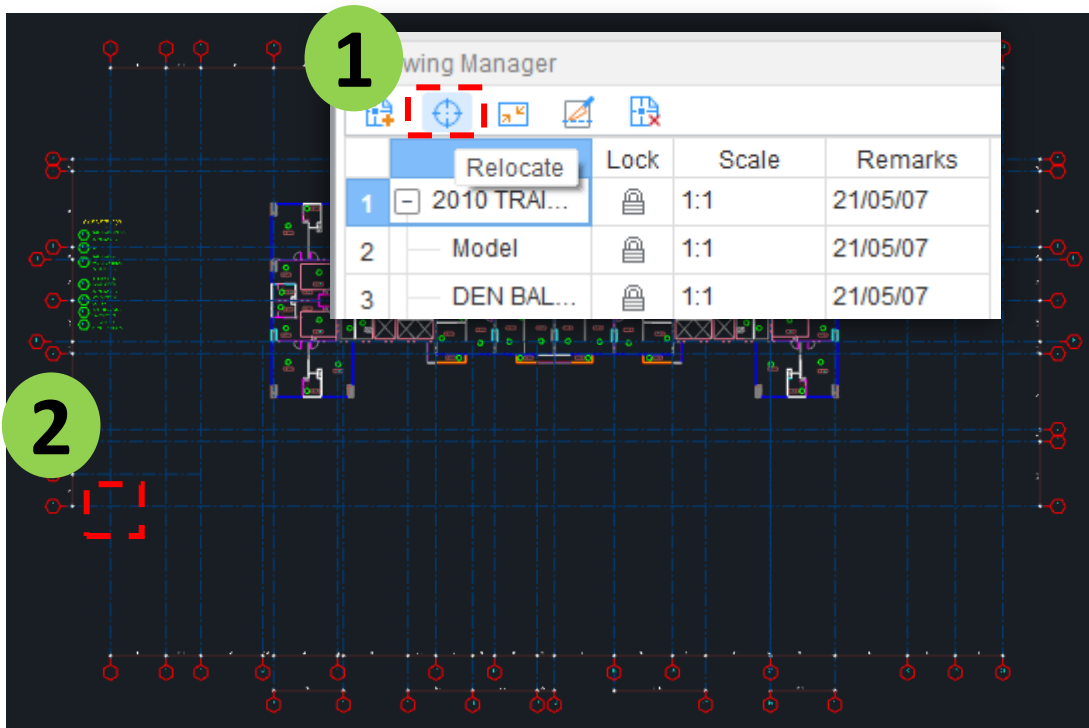
- Step 1: Tab {Draw}, Create [New Orthogonal Axis Grid] according to floor plan
- Step 2: Select Position of axis & input the Numbering & Distance
- Step 3: Click [Ok]



4.0c Locate Drawing

- Step 1: Tab {Identify}, Click [Relocate]
- Step 2: Click on 1 specific point on drawing, eg: A/1
- Step 3: Move to same specific point on gridline

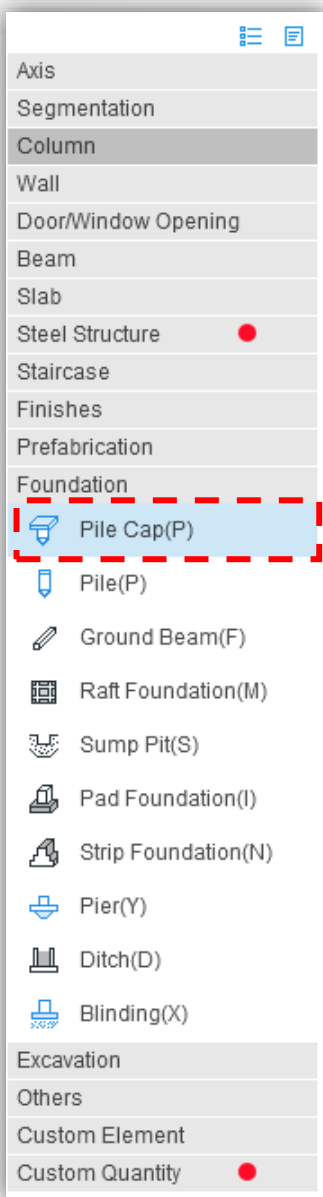
*Tips: use Intersection point  if the point cannot be snap accurately 



Point Type



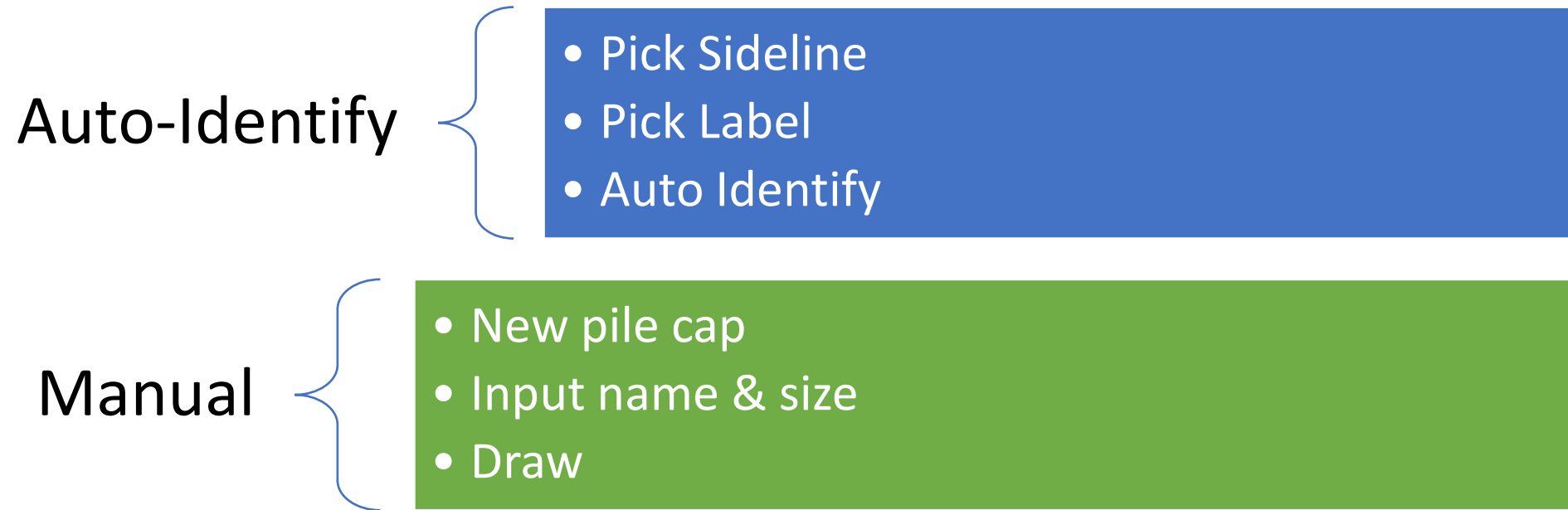
Pile Cap



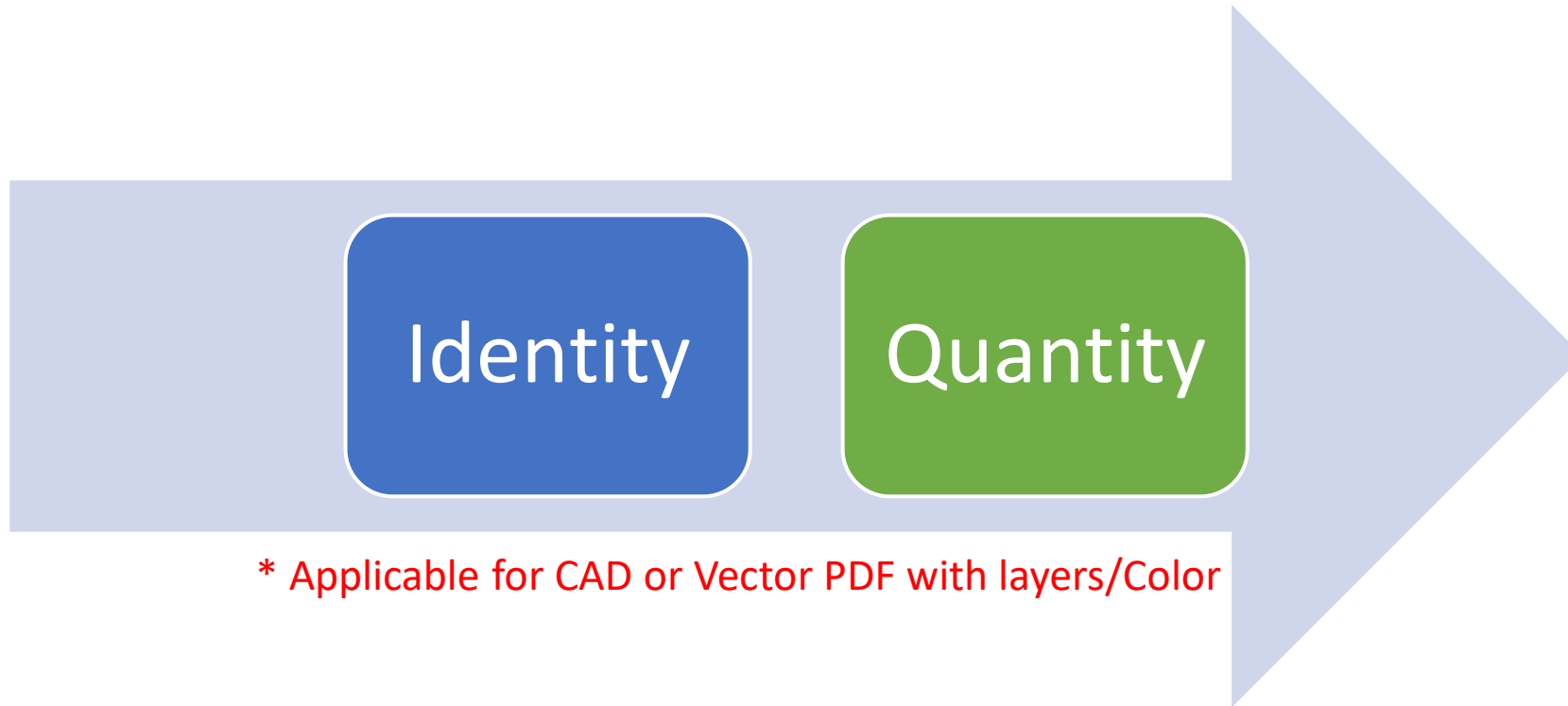
5.9 Pile Cap



4.0 Pile Cap



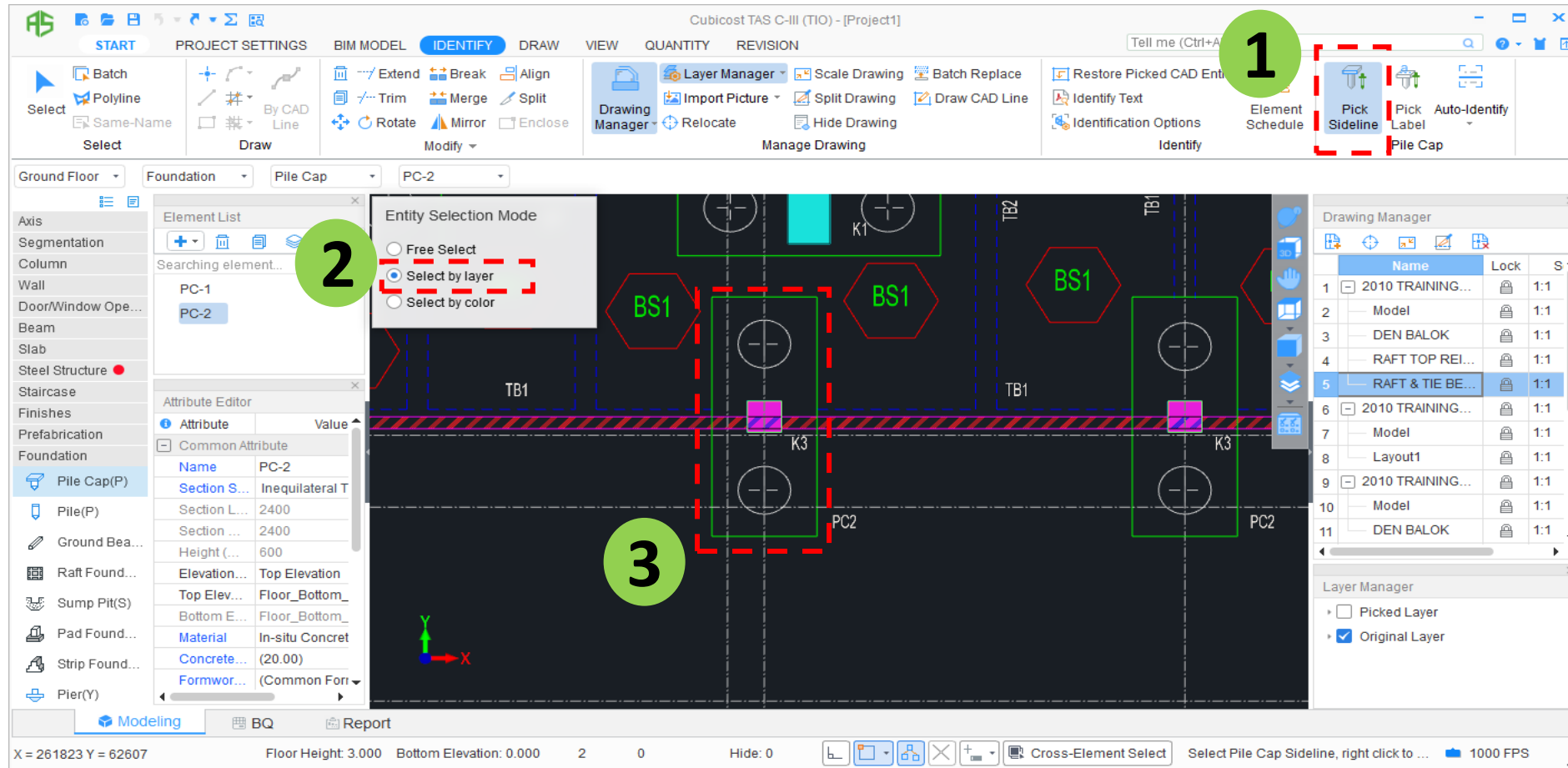
5.1(ii) Pile Cap – Auto Identify



* Applicable for CAD or Vector PDF with layers/Color

5.1(ii) Identify Pile Cap – Pick Sideline

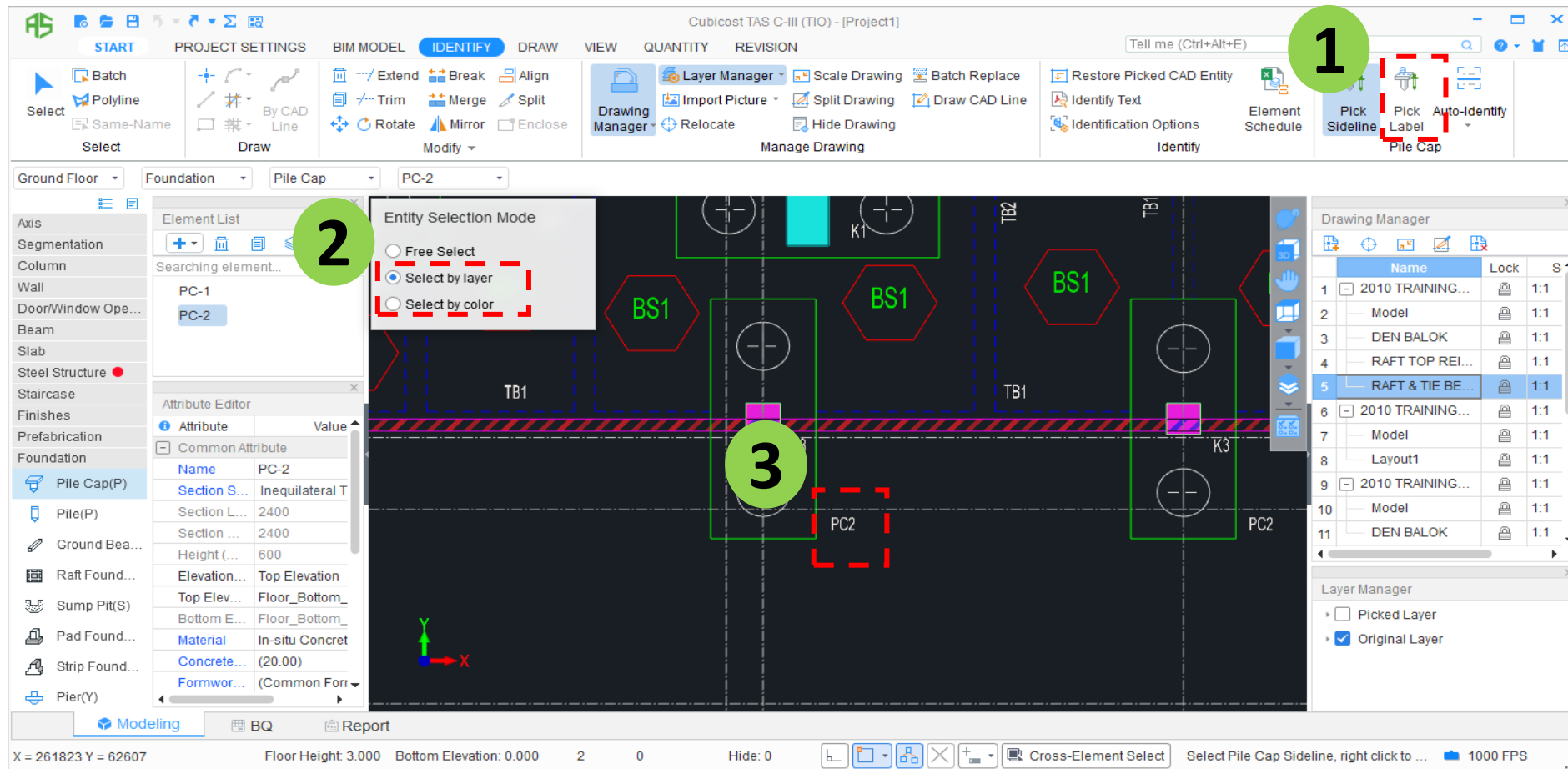
- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the frame/ side line of Pile Cap & right click



Continue →

5.1(ii) Identify Pile Cap – Pick Label

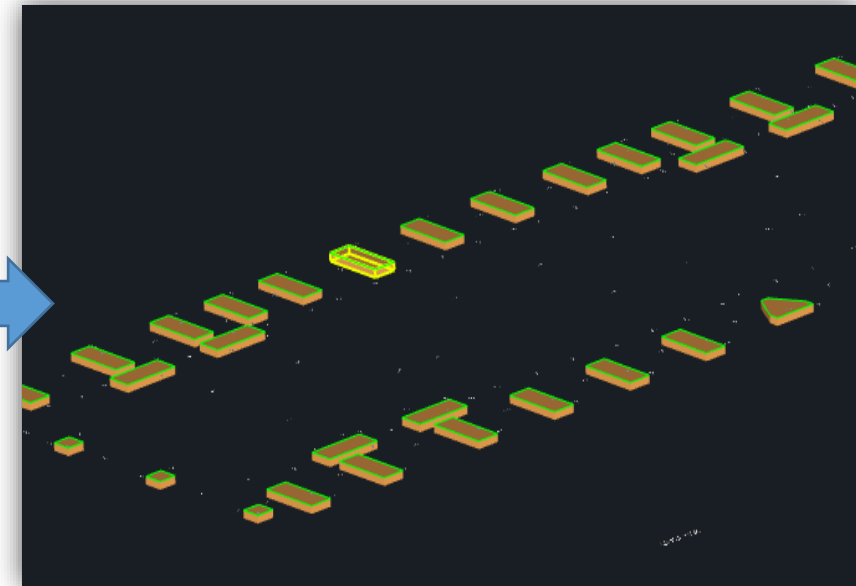
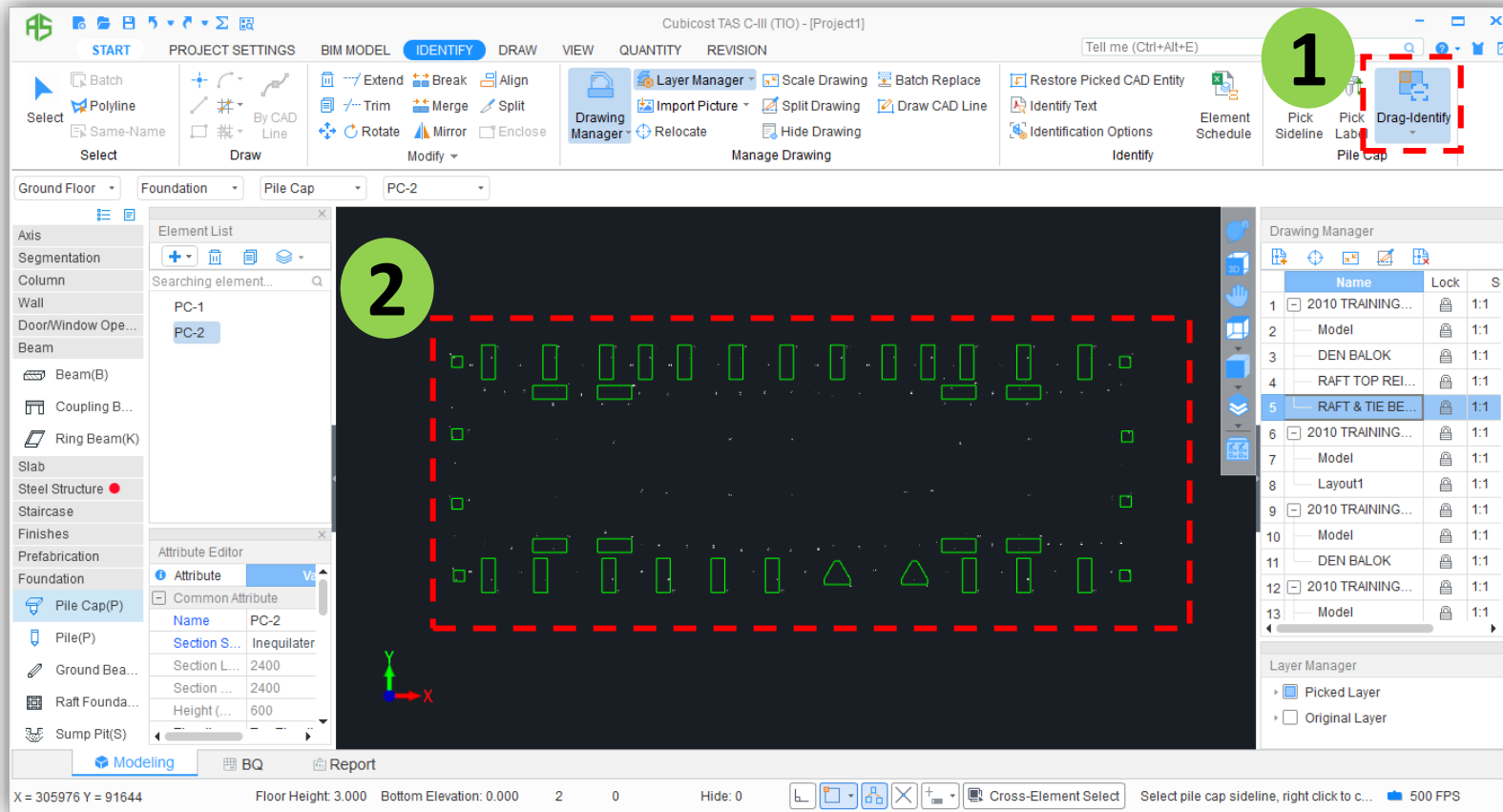
- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the name of column & right click



Continue →

5.1(ii) Identify Pile Cap - Identify

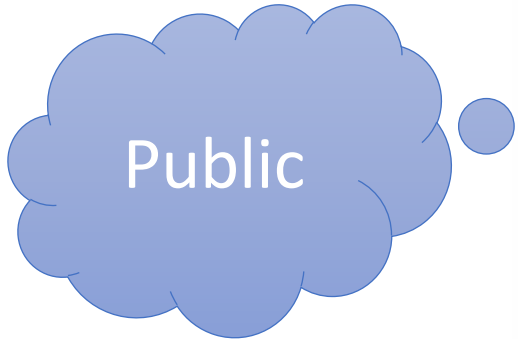
- **Step 1:** Tab {Identify}, Select **[Auto-Identify]/ [Drag-Identify]** ← **Selected area**
- **Step 2:** **Highlight** the certain area, right click



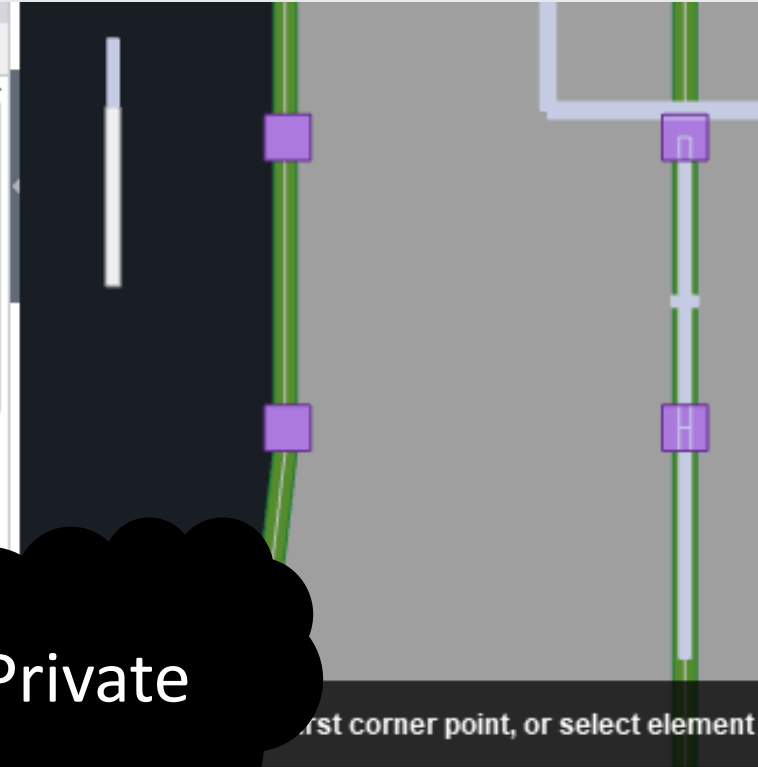
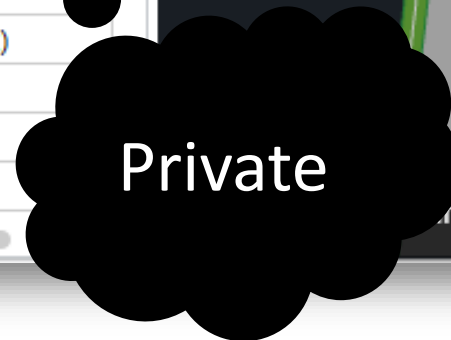
Public Attribute VS Private Attribute

Public: **WITHOUT SELECTION**, The changes apply to all the same name entities

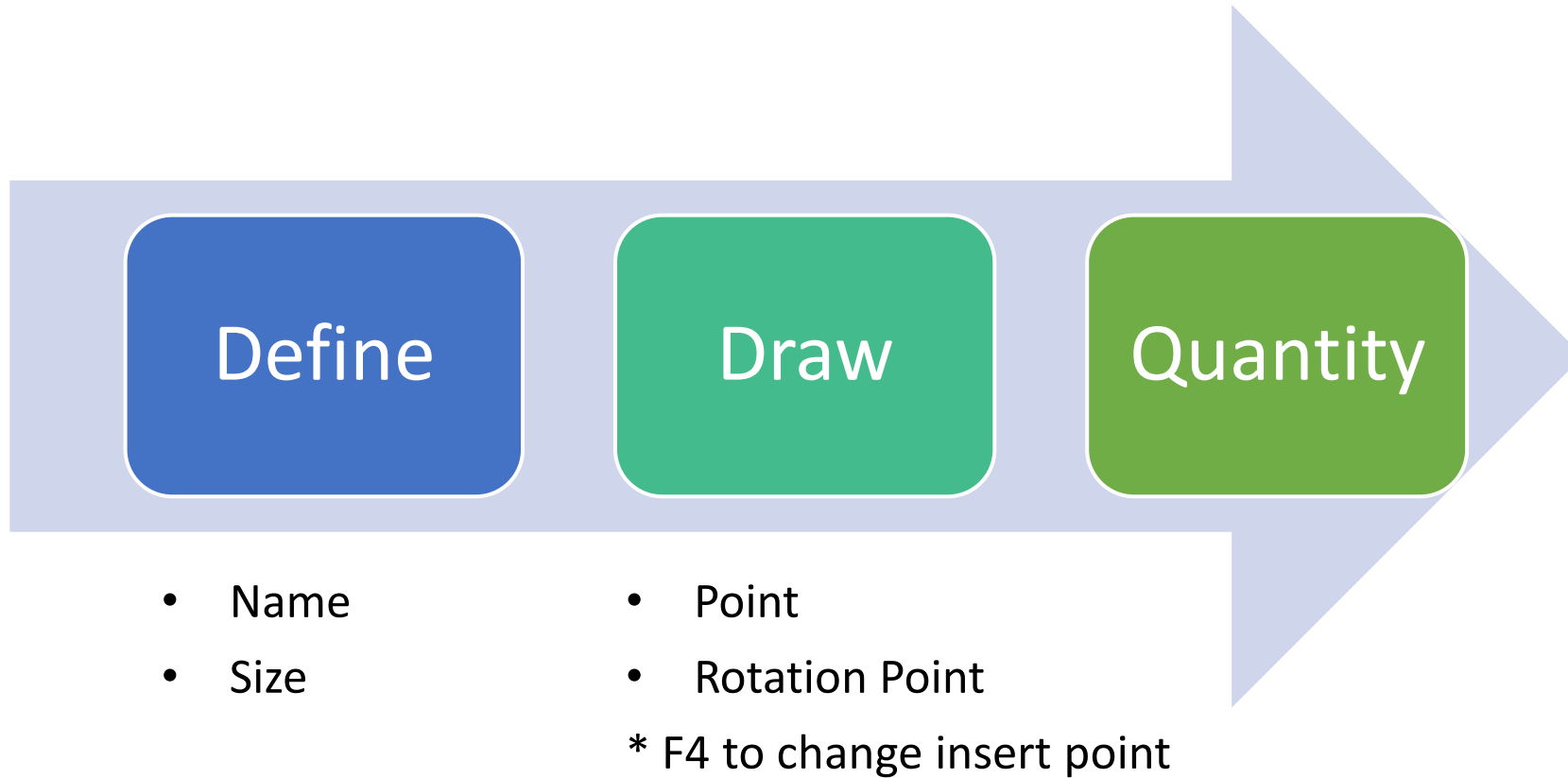
Private: The changes will only take effect with the items/Model/entity being **SELECTED (MUST)**, otherwise the modification will be invalid



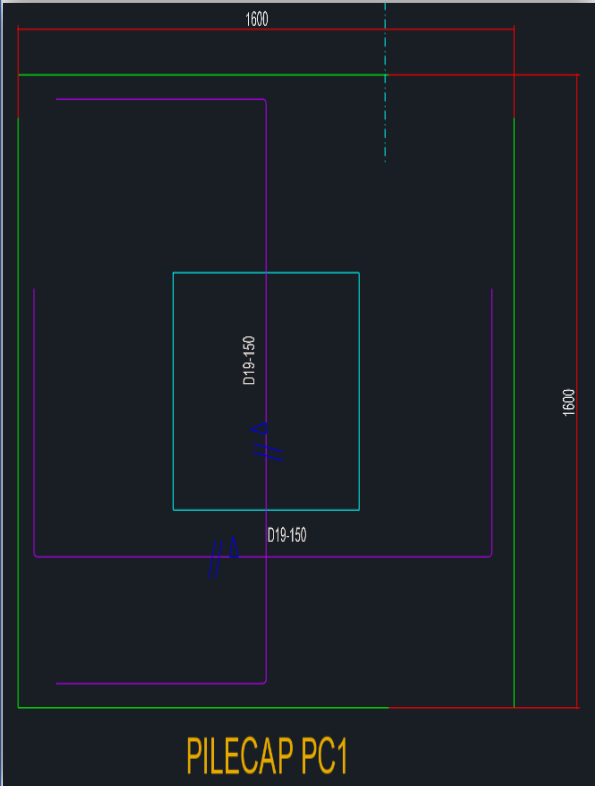
Attribute Editor	
Attribute	Value
Common Attribute	
Name	PC1
Material	In-situ Concrete
Section Width (mm)	600
Section Height (mm)	600
Top Elevation (m)	Floor_Top_Elevation
Bottom Elevation (m)	Floor_Bottom_Elevation
Concrete Grade	(C32/40)
Formwork Type	(Common Formwork)
Entity Type	(Vertical)
Category 1	Frame Column
Category 2	



5.9 Pile Cap – Manual way

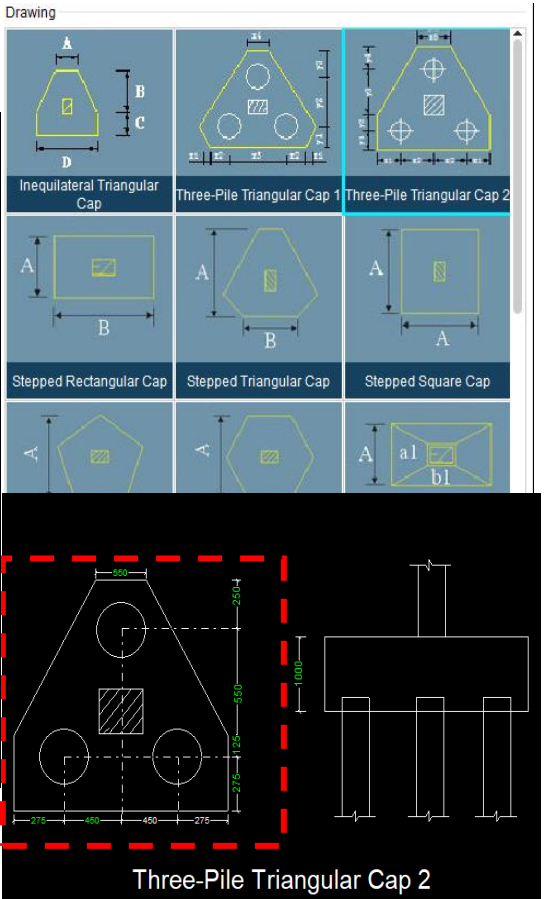
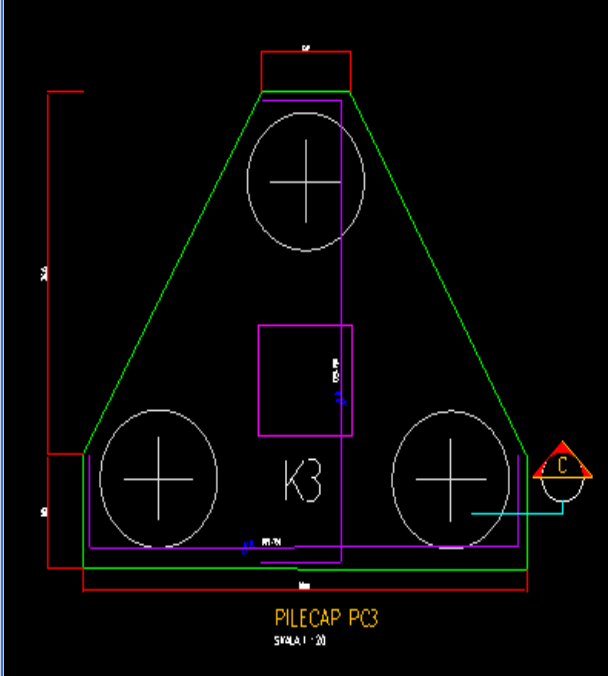


5.9a Define Pile Cap



Attribute Editor		
	Attribute	Value
Common Attribute		
	Name	PC-1
	Section Length (mm)	1600
	Section Width (mm)	1600
	Height (mm)	1500
	Elevation Positioning ...	Top Elevation
	Top Elevation (m)	Floor_Bottom_...
	Bottom Elevation (m)	Floor_Bottom_...
	Material	In-situ Concrete
	Concrete Grade	(20.00)
	Formwork Type	(Common Form...
	Category	Strip
	Concrete Type	(Common Conc...

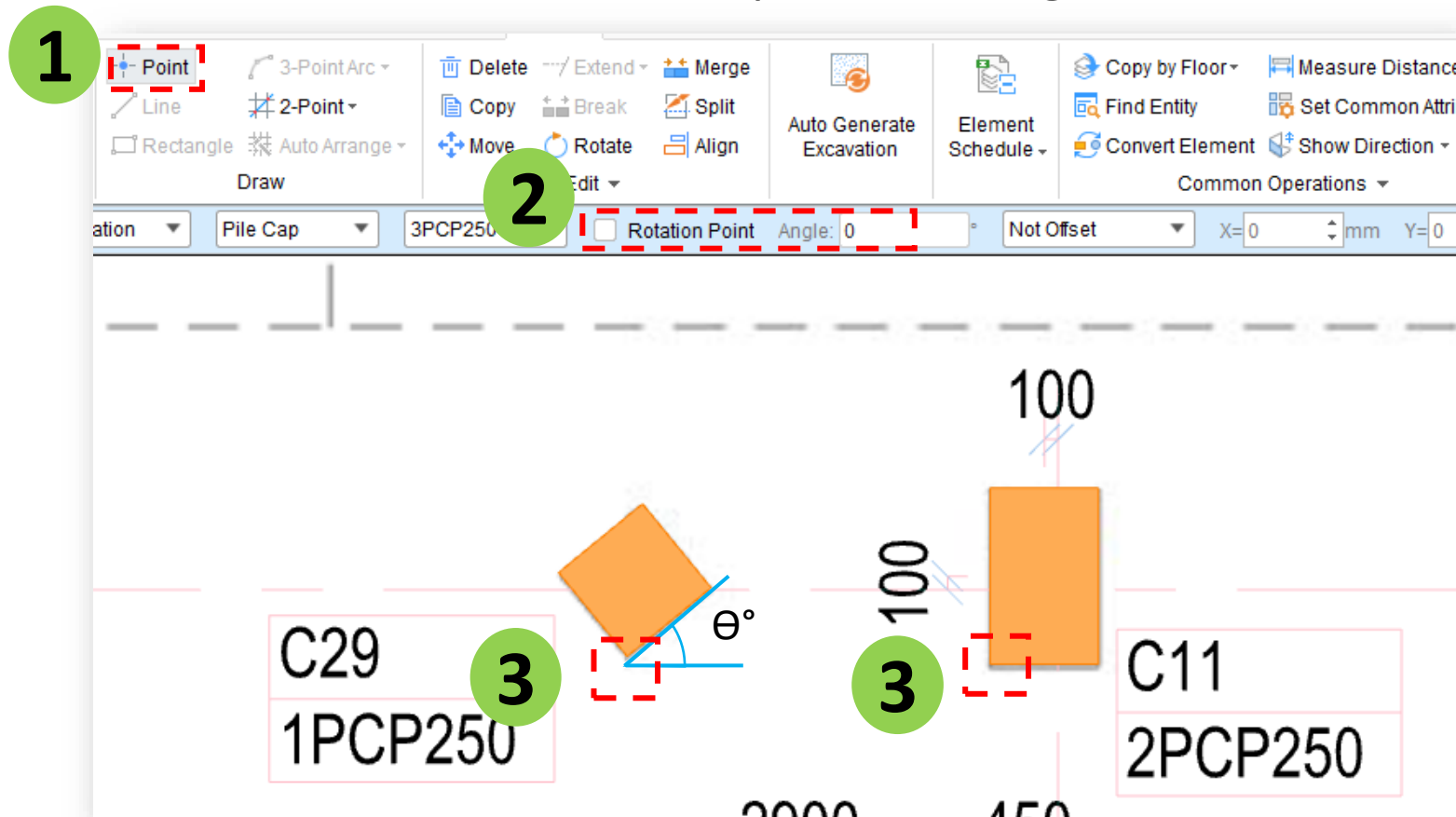
Rectangular Pile Cap



Parametric Pile Cap

5.9b Draw Pile Cap

- Step 1: Tab {Draw}, Click [Point]
- Step 2: For non-right-angle Pile Cap, tick on [Rotation Point] to rotate to certain degree
- Step 3: Point to the location of the Pile Cap on drawing



5.9c Quantity of Pile Cap

Notes:

Which quantity to extract for PILE CAP

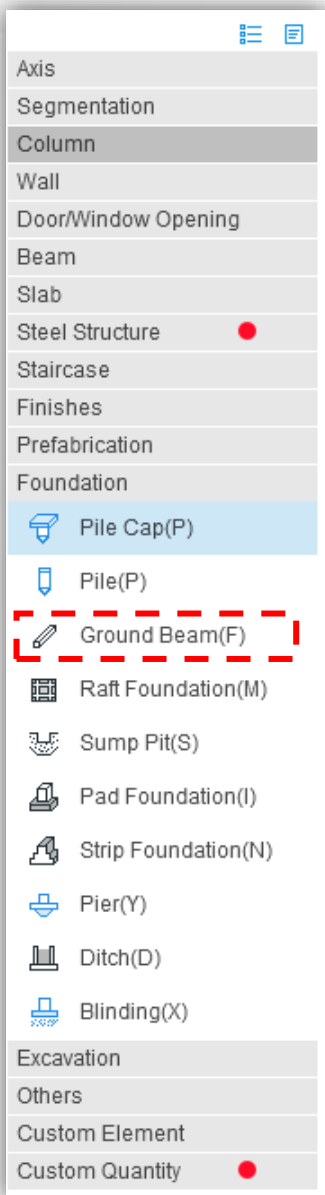
Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume
Formwork (m2)	Area of Formwork

	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	1.380<Original Volume>	1.380	m3
2	Area of Formwork	AF2	4.636<Original Area of Formwork>	4.636	m2
3	Area of Soffit	AS2	1.380<Original Area of Soffit>	1.380	m2
4	Area of Side	AS4	4.636<Original Area of Side>	4.636	m2
5	Area of Top	ATS	1.380<Original Area of Top>	1.380	m2
6	Number	N		1	pc
7	Weight of Rebar	WR	1.380<Volume>*50.000<Steel ...	0.069	t

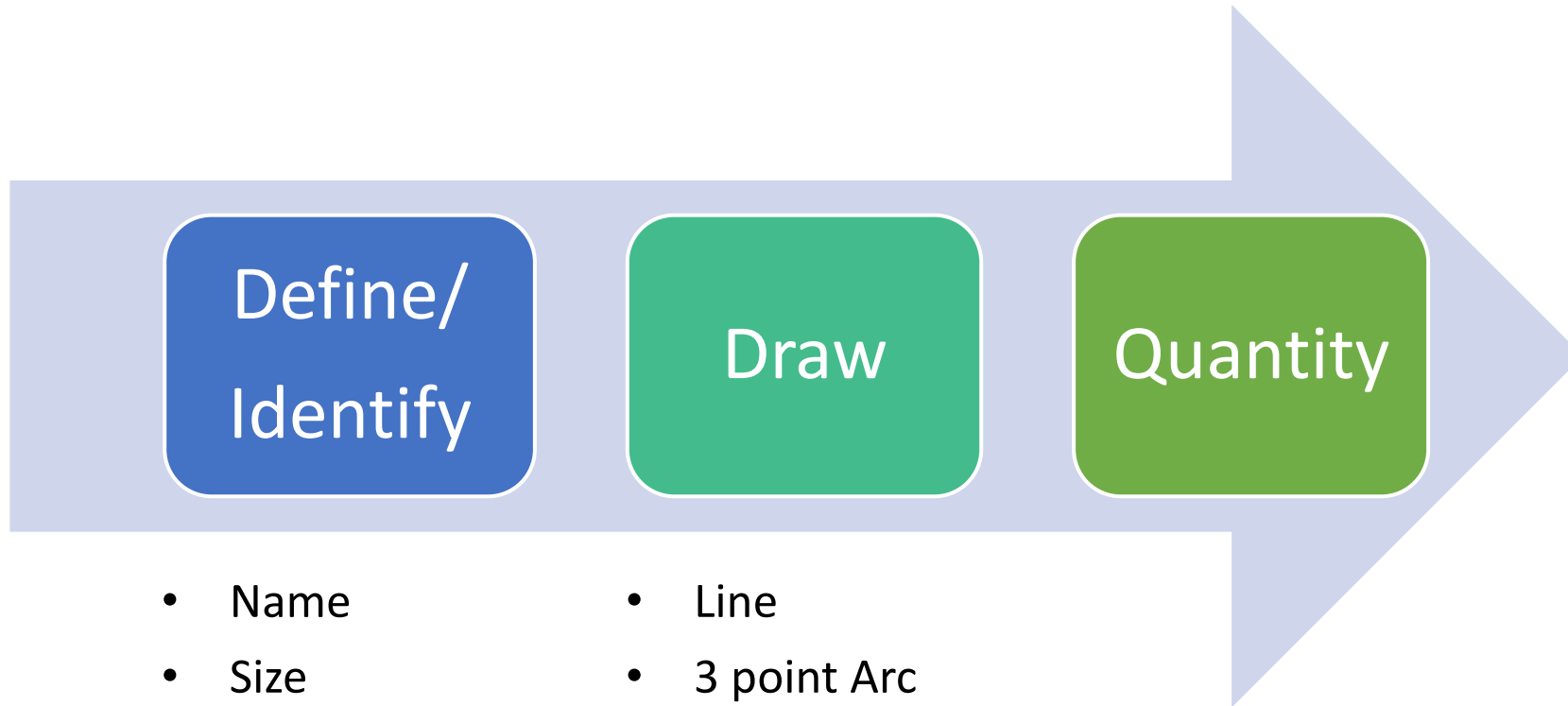
Linear Type



Tie Beam



5.4 Beam



- Name
- Size
- Material

- Line
- 3 point Arc
- * F4 to change alignment

5.4a Define Beam

1

TB1

2

700

400

6D19 TOP

D13-125

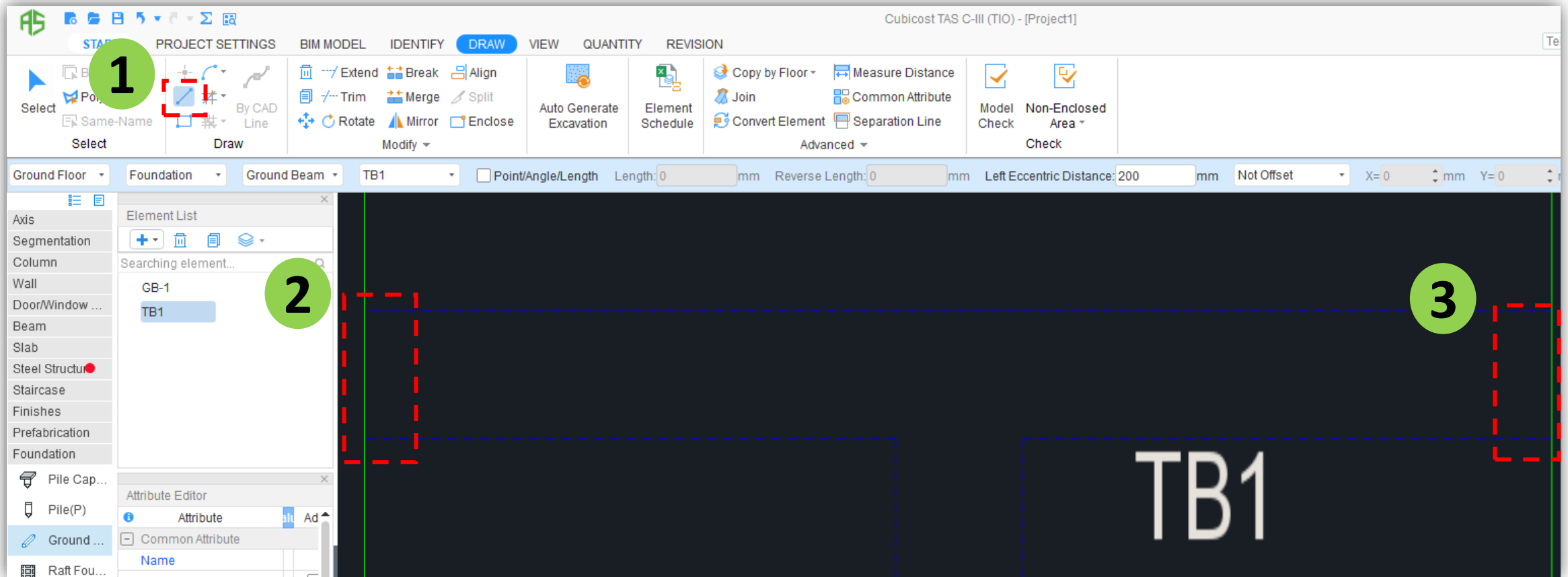
6D

Attribute Editor

Attribute	Value	Add
Common Attribute		
Name	TB1	☐
Section Width (mm)	400	☐
Section Height (mm)	700	☐
Start Top Elevation (m)	Foundation_To...	☐
End Top Elevation (m)	Foundation_To...	☐
Axis to Left Sideline (m...	(200)	☐
Concrete Grade	(20.00)	☐
Formwork Type	(Common For...	☐

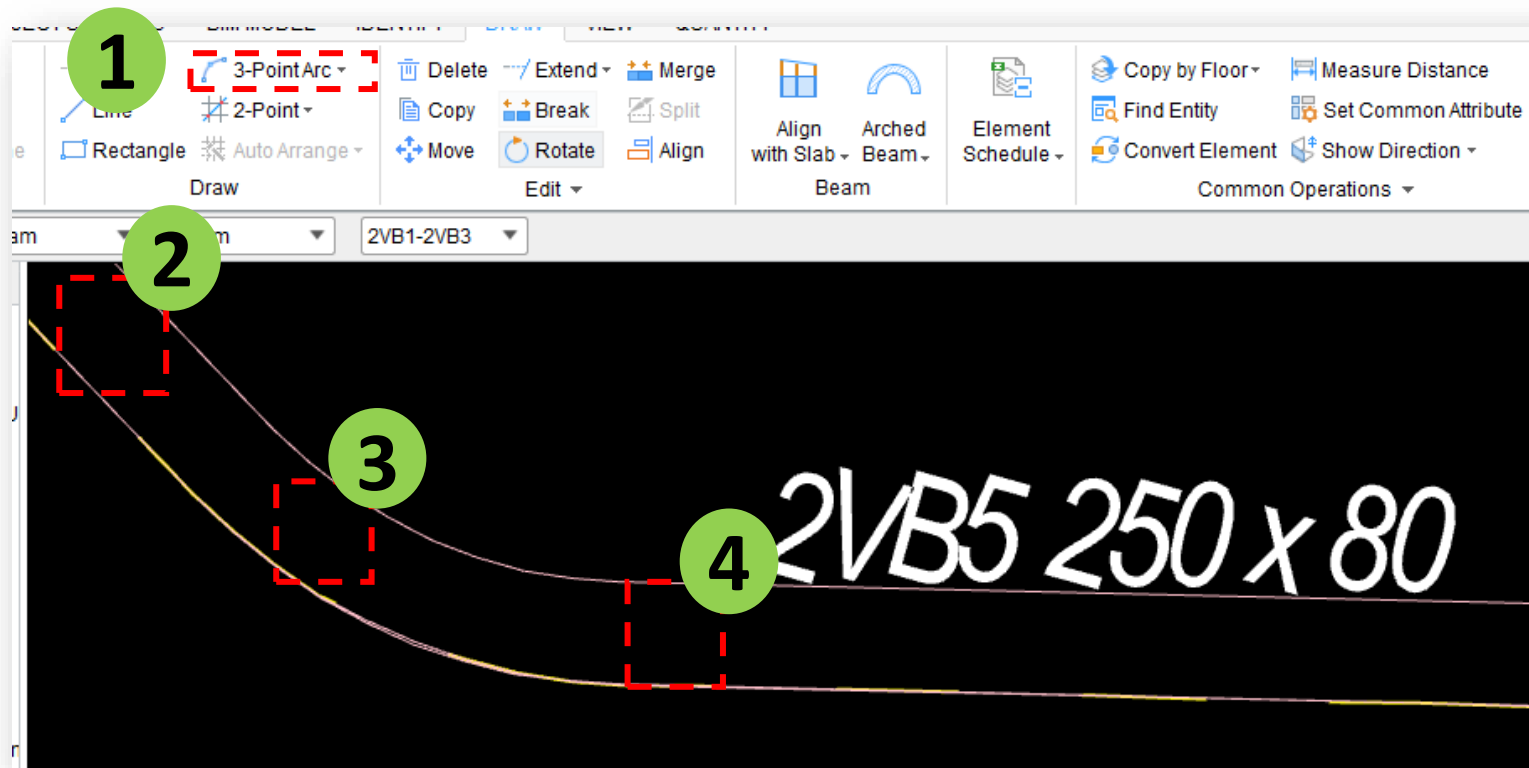
5.4b Draw Beam

- Step 1: Tab {Draw}, Click [Line] to draw a straight line
- Step 2: Begin from Start Point
- Step 3: Stop at End Point



5.4b Draw Beam (cont'd)

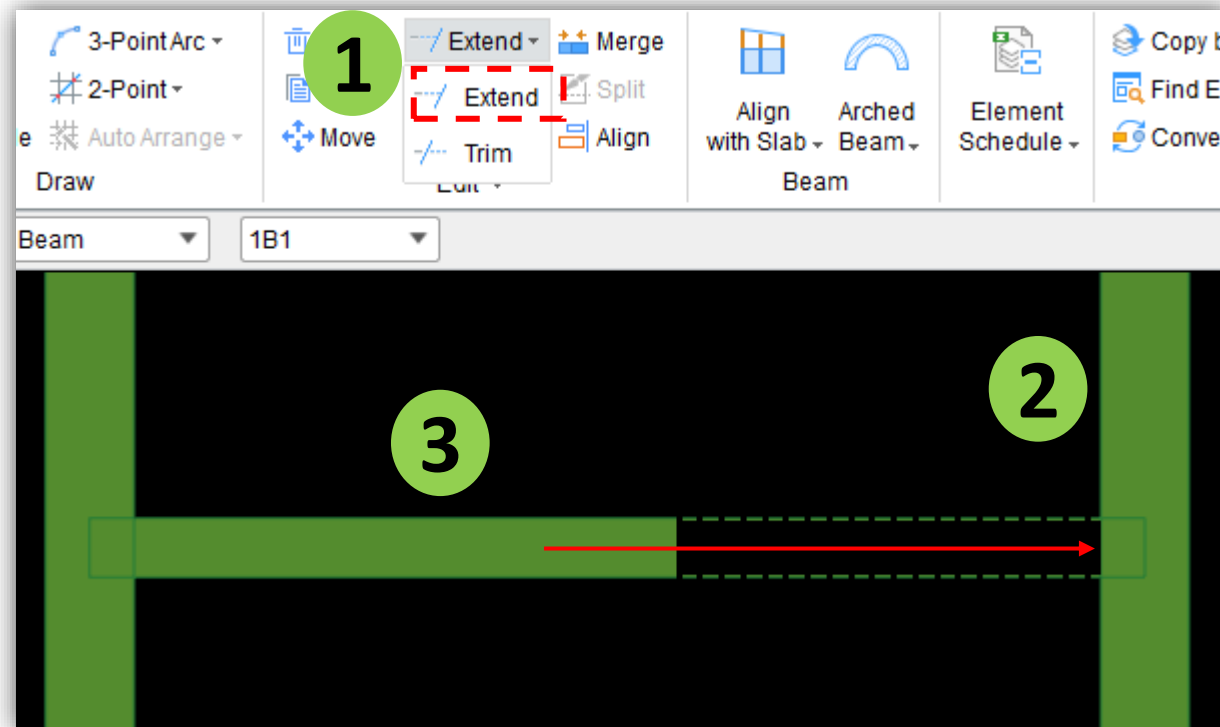
- Step 1: Tab {Draw}, Click [3-point Arc] to draw curve beam
- Step 2: Begin from Start Point
- Step 3: Continue at Mid Point
- Step 4: Stop at End Point



5.4b Draw Beam (cont'd)

To Extend beam/ wall

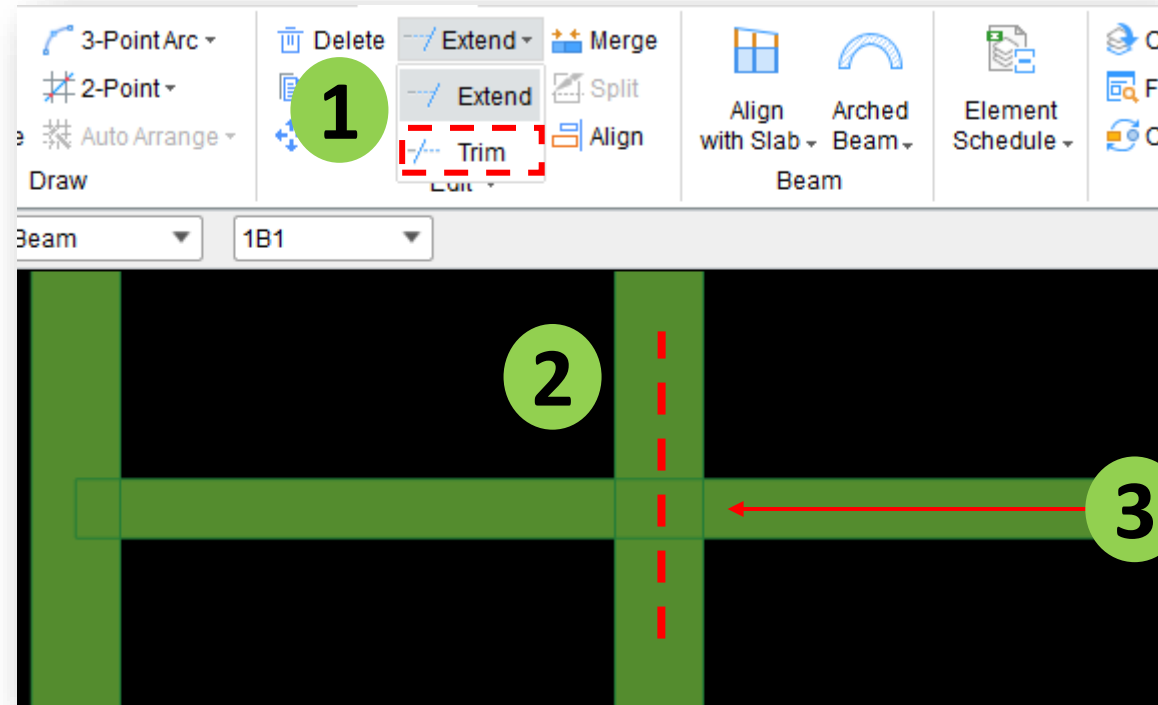
- Step 1: Tab {Draw}, Click [Extend]
- Step 2: Choose target line
- Step 3: Click on selected beam/ wall



5.4b Draw Beam (cont'd)

To Trim beam/ wall

- Step 1: Tab {Draw}, Click [Trim]
- Step 2: Choose target line
- Step 3: Click on redundant beam/ wall



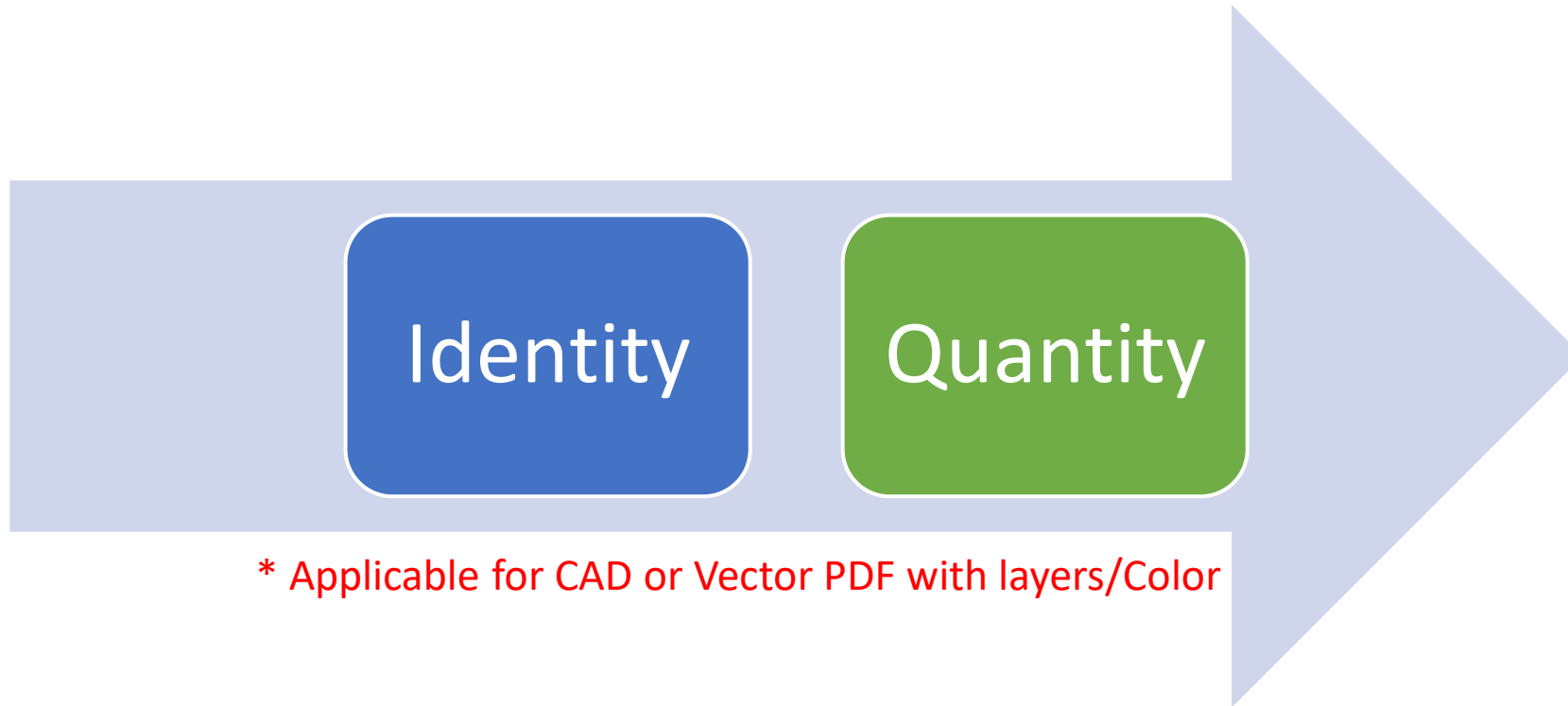
5.4b Draw Beam (cont'd)

To align beam/ wall

- Step 1: Tab {Draw}, Click [\[Align\]](#)
- Step 2: Choose [target](#) line
- Step 3: Click on [select](#) beam/ wall sideline



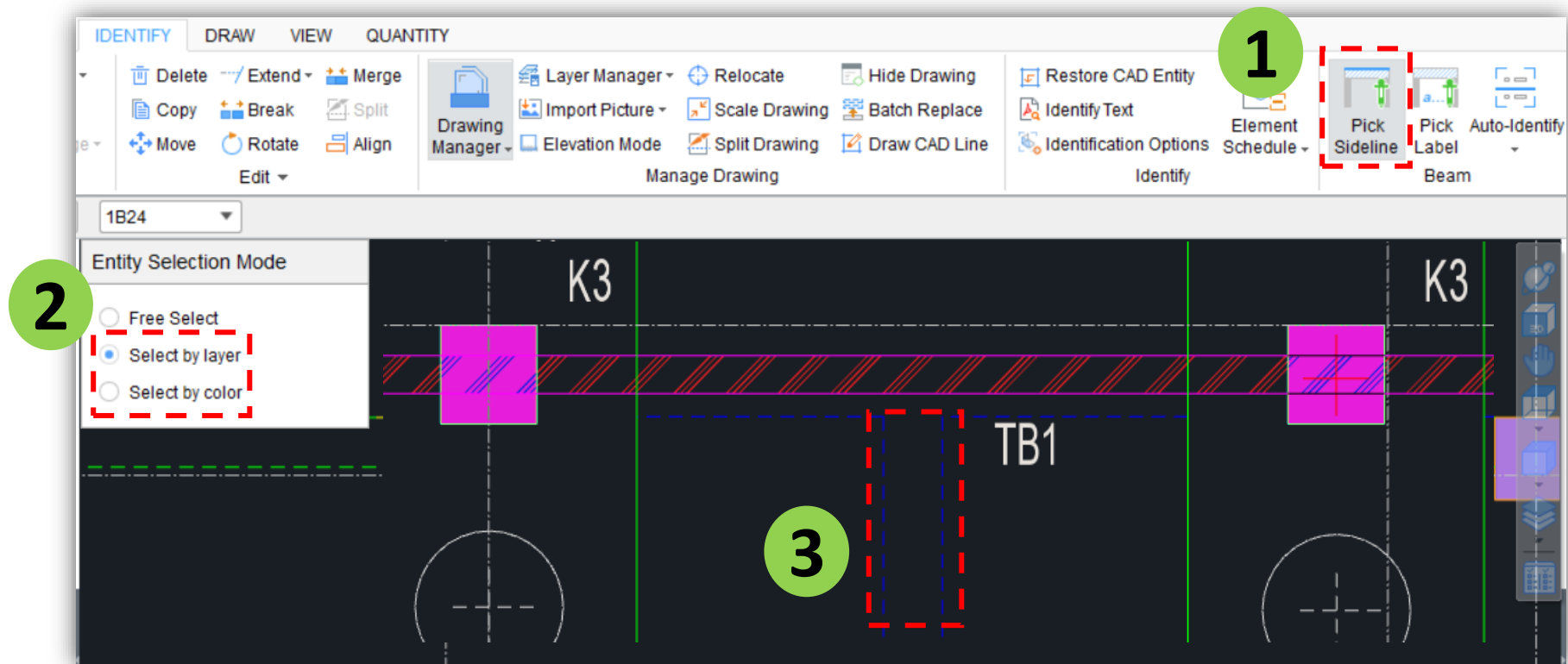
5.4(ii) Beam (Option 2)



* Applicable for CAD or Vector PDF with layers/Color

5.4(ii) Identify Beam – Pick Sideline

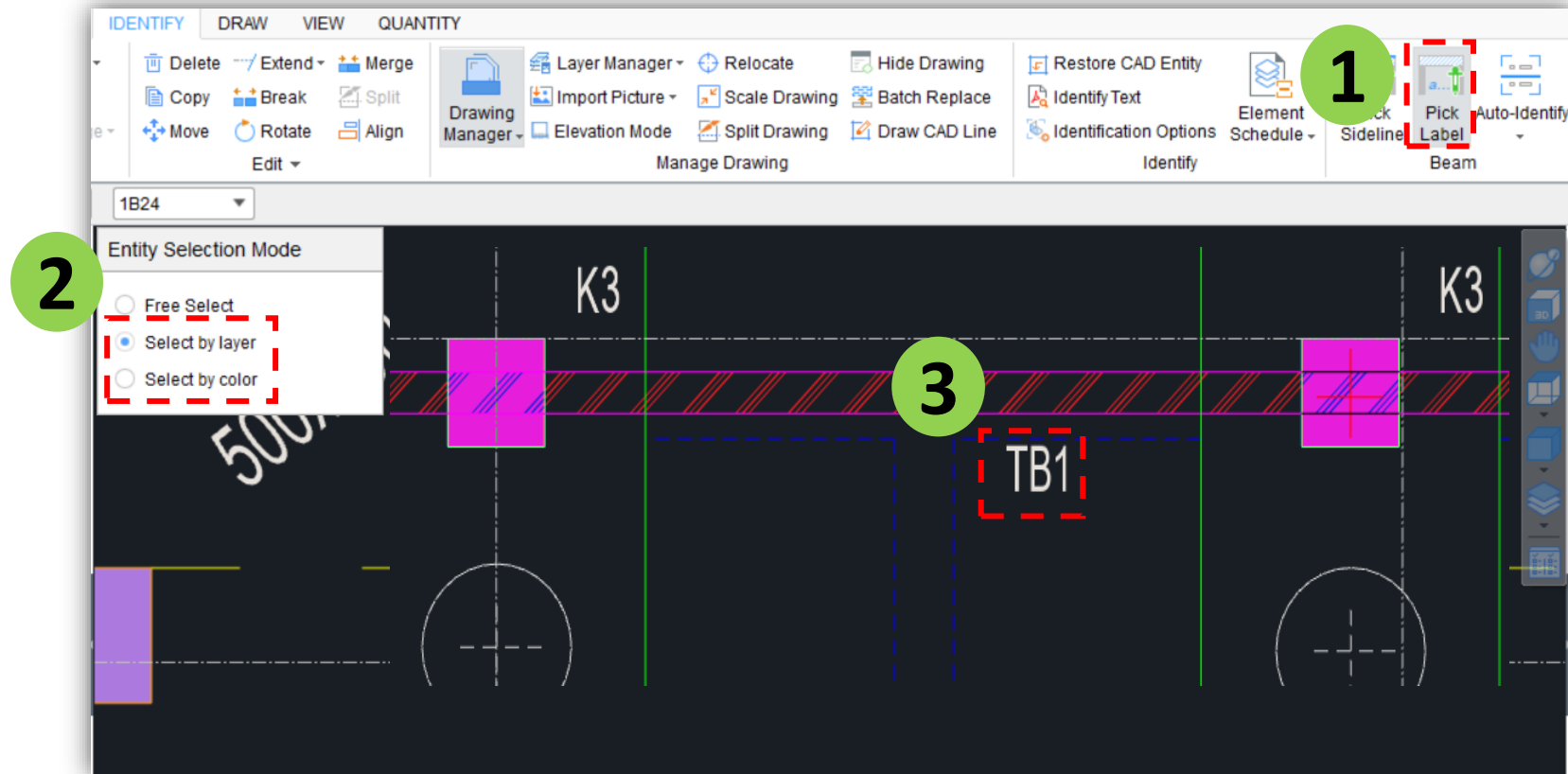
- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the frame/ side line of beam & right click



Continue →

5.4(ii) Identify Beam – Pick Label

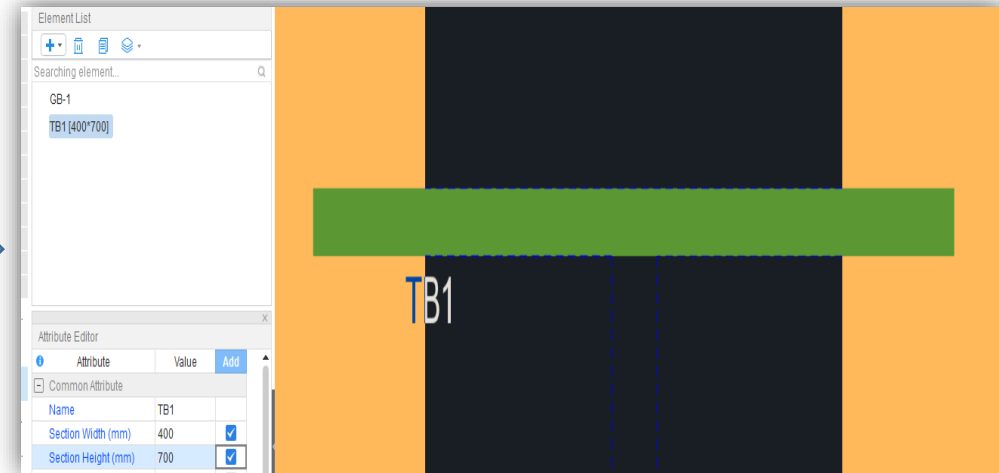
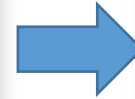
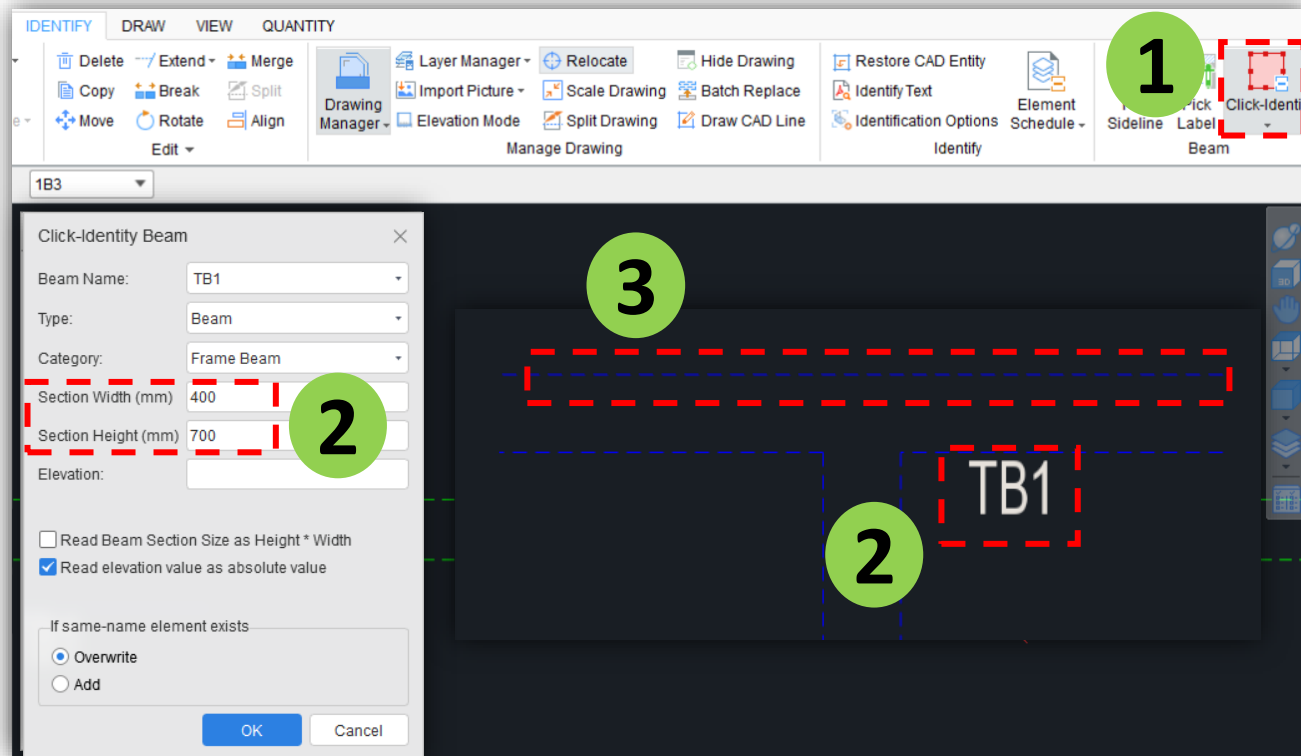
- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the name of beam & right click



Continue →

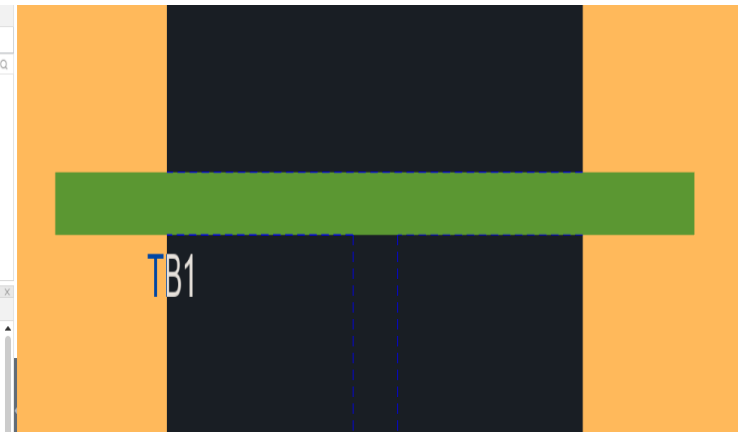
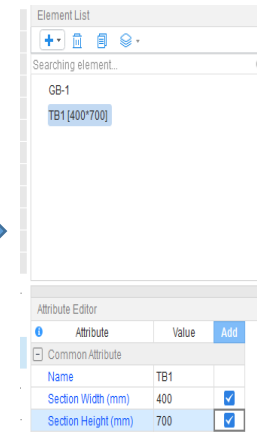
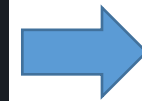
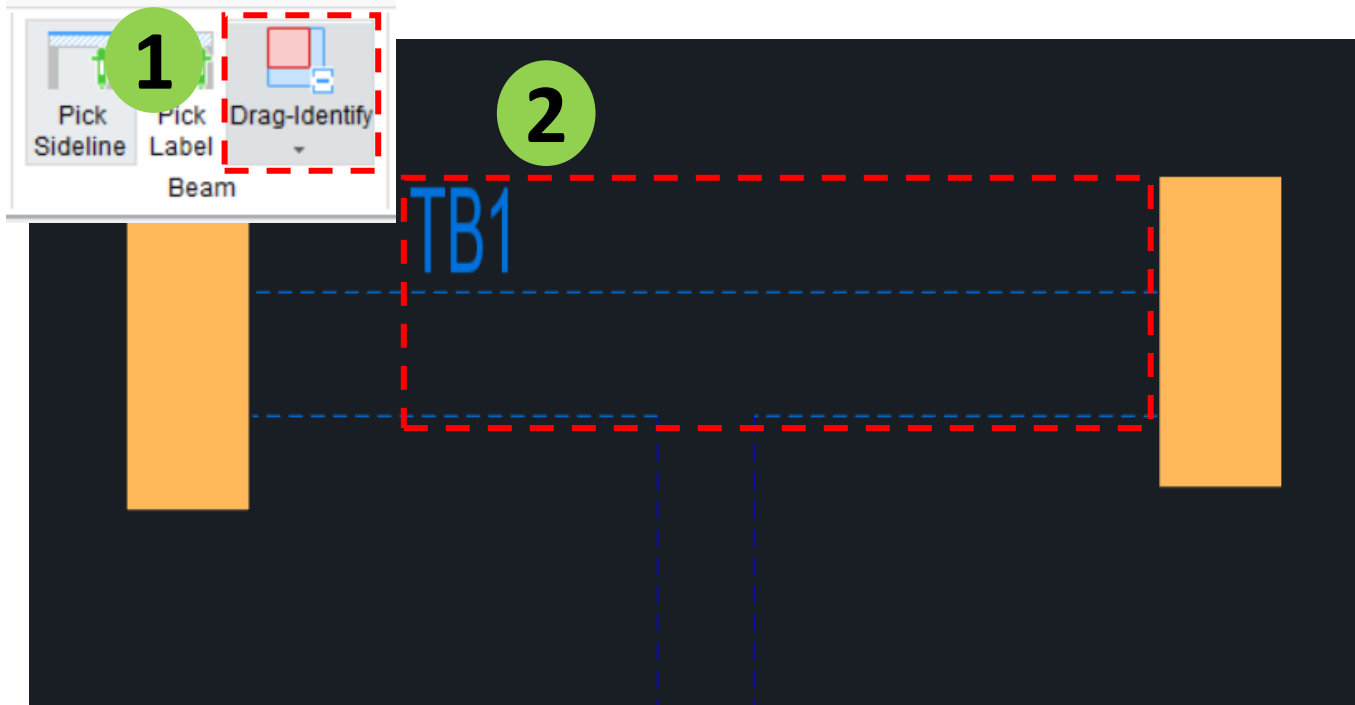
5.4(ii) Identify Beam – By [Click-Identify]

- **Step 1:** Tab {Identify}, Select **[Click-Identify]**
- **Step 2:** Select the beam name & input beam size, right click
- **Step 3:** Select the beam sideline, right click



5.4(ii) Identify Beam – By [Drag-Identify] Selected area

- **Step 1:** Tab {Identify}, Select [Drag-Identify]
- **Step 2:** Drag and Select both the beam sideline & name, right click
- **Step 3:** Modify the section height of beam from 500mm to 700mm in the attribute editor



5.4c Quantity of Beam

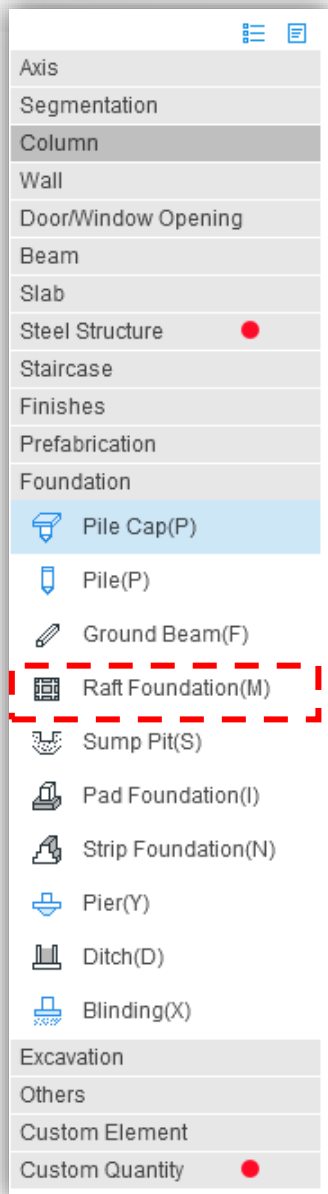
Notes:

Which quantity to extract for TIE BEAM

Quantity you need	Quantity to extract from Glodon	
Concrete (m3)	Volume	
Formwork (m2)	Area of Formwork	Area of Formwork to side; Area of Formwork to soffit;

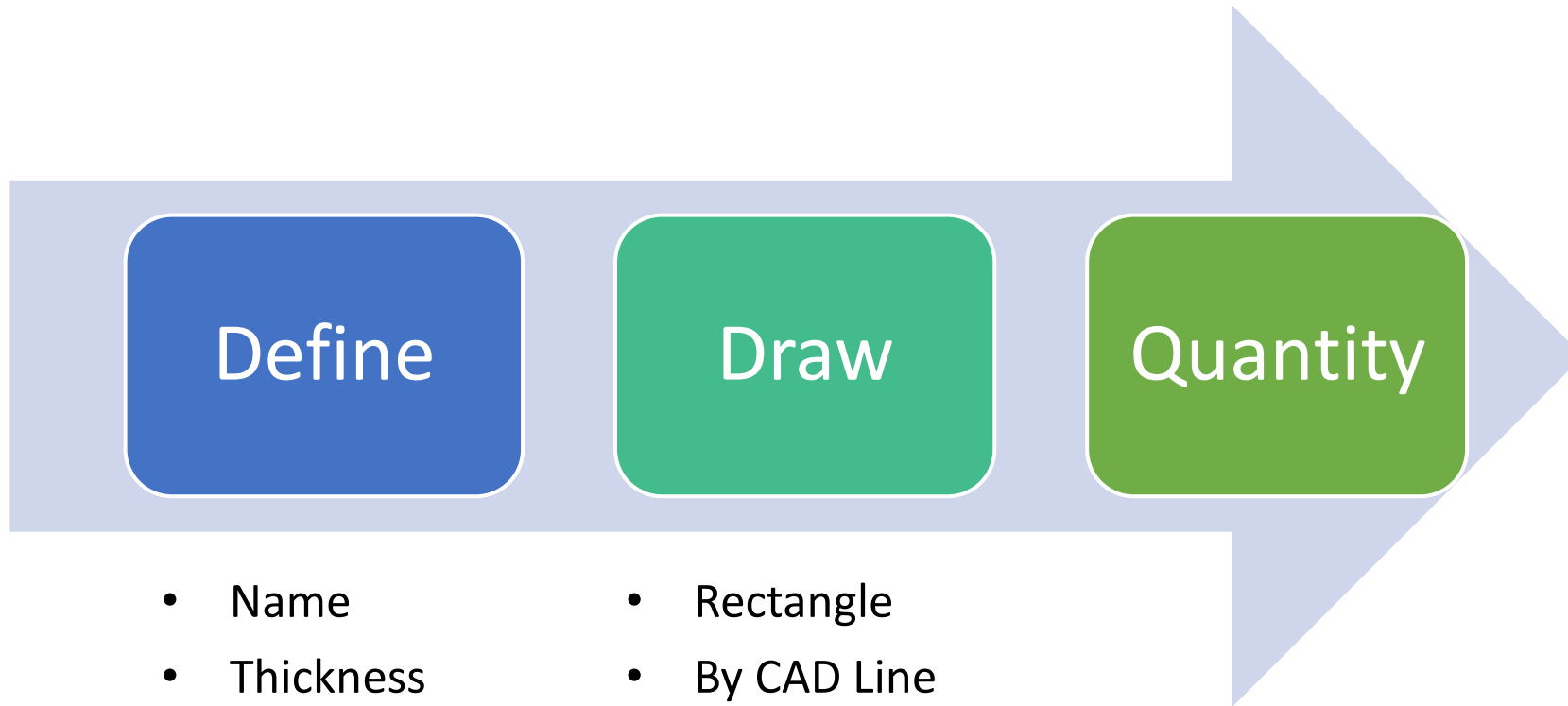
	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	1.481<Original volume>-0.040<Deduct raft foun...	1.441	m3
2	Area of formwork to side	(0.500<Height>*7.403<Length of centerline>*2)+0.200<Original area of formwork...	7.003	m2
3	Area of formwork to soffit	(0.400<Width>*7.403<Length of centerline>)-0.080<Deduct raft foundation>	2.881	m2
4	Weight of rebar	1.441<Volume>*50.000<Steel ratio>	72.025	kg

Area Type



Raft Foundation

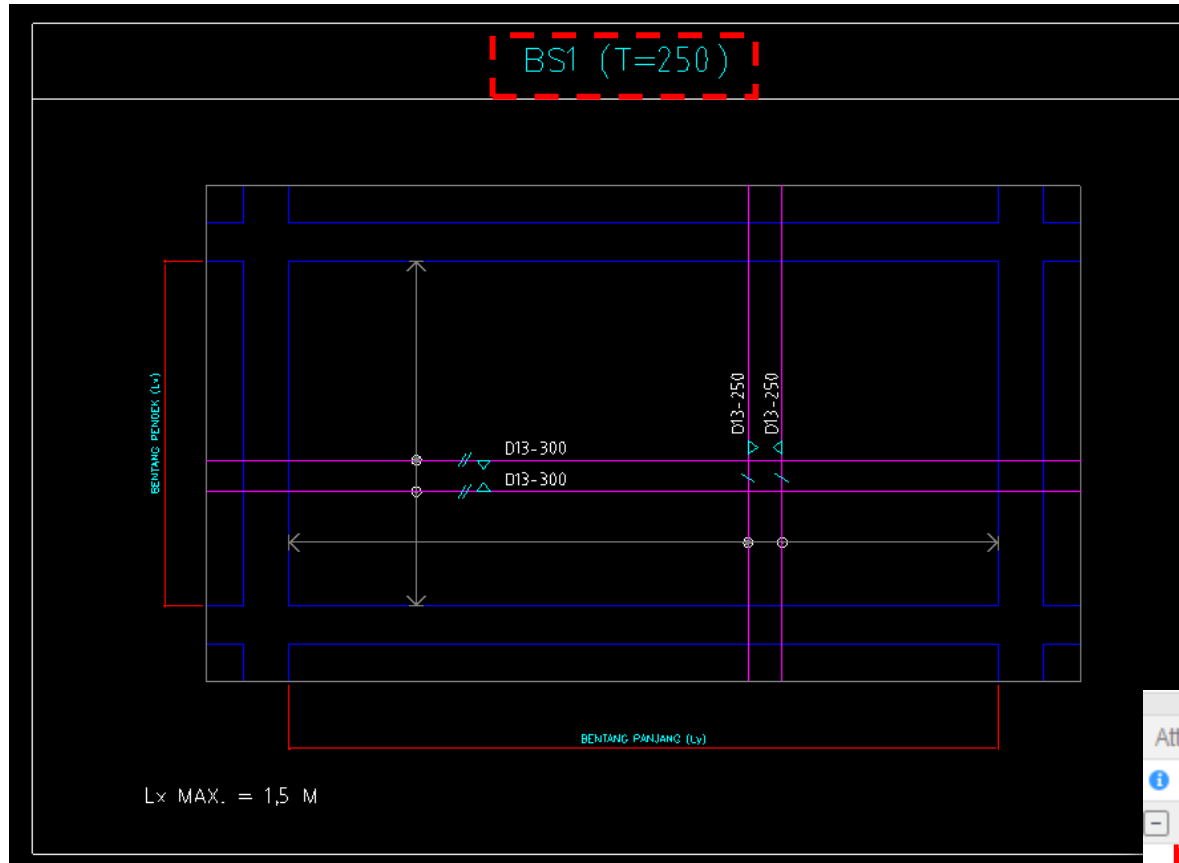
5.8 Raft Foundation



- Name
- Thickness

- Rectangle
- By CAD Line
- Variable section
- Slope Edge

Define Raft Foundation

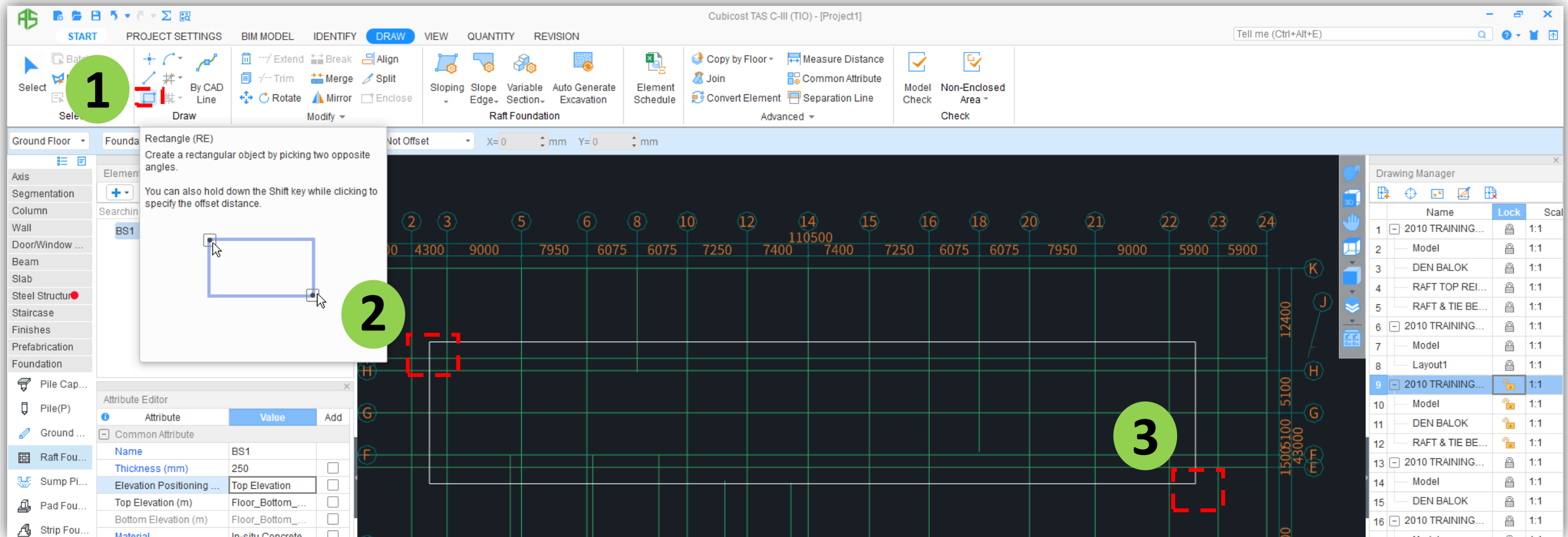


Attribute Editor

Attribute	Value	Add
Common Attribute		
Name	BS1	☐
Thickness (mm)	250	☐
Elevation Positioning ...	Top Elevation	☐
Top Elevation (m)	Floor_Bottom_...	☐
Bottom Elevation (m)	Floor_Bottom_...	☐
Material	In-situ Concrete	☐
Concrete Grade	(20.00)	☐

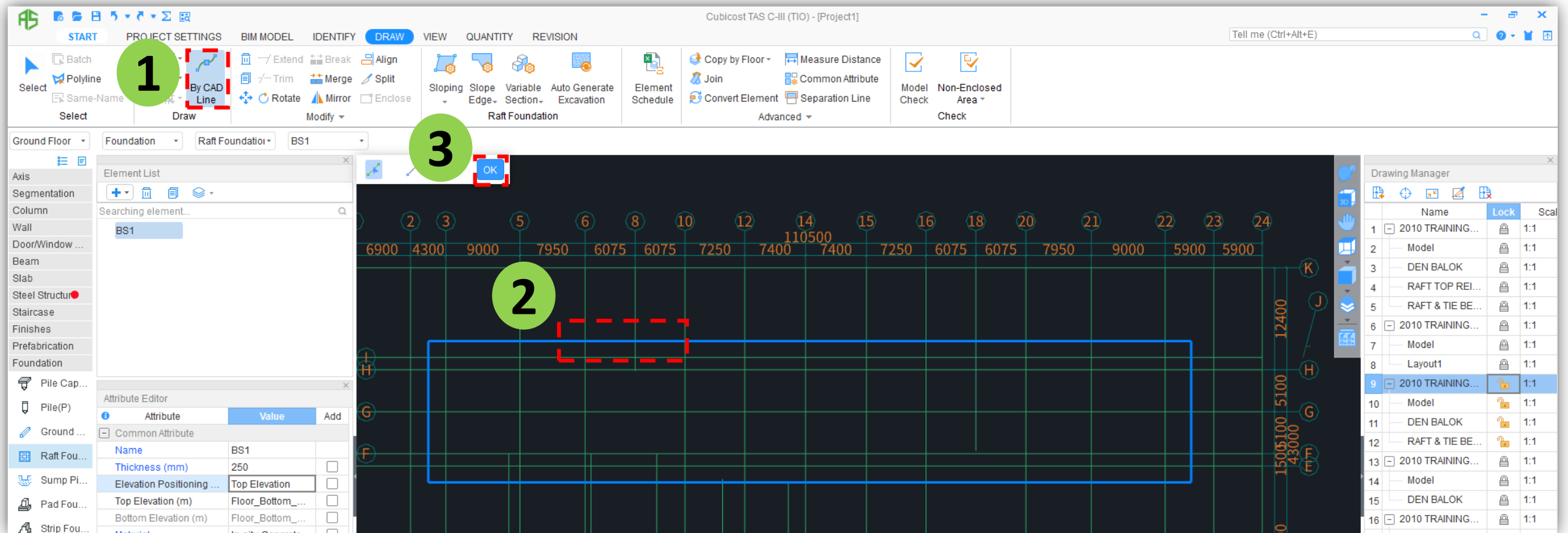
Draw Raft Foundation -Rectangle

- Step 1: Tab {Draw}, Click [Rectangle] to draw a rectangle
- Step 2: Begin from Start Point
- Step 3: Stop at End Point



Draw Raft Foundation –By CAD Line

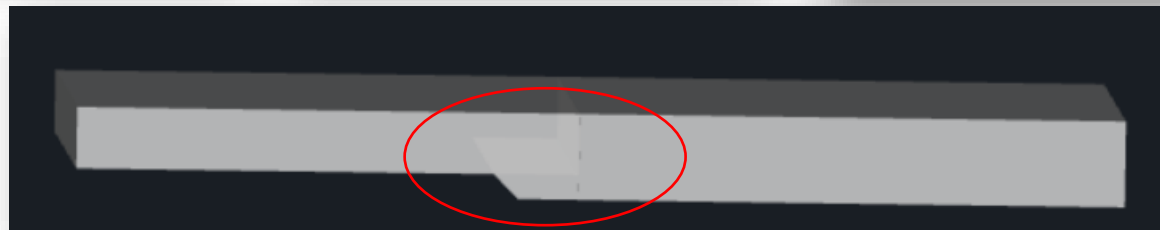
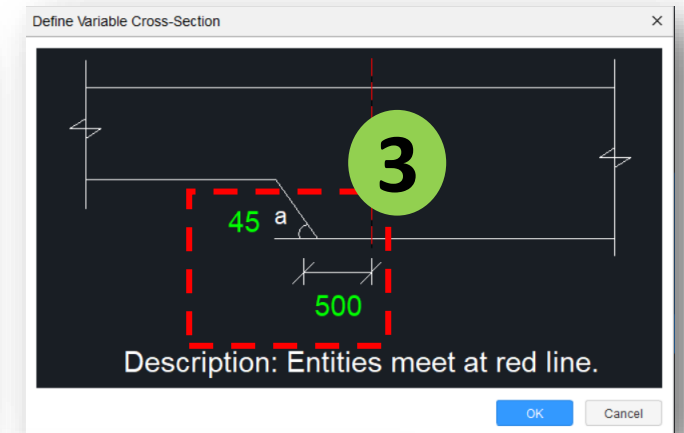
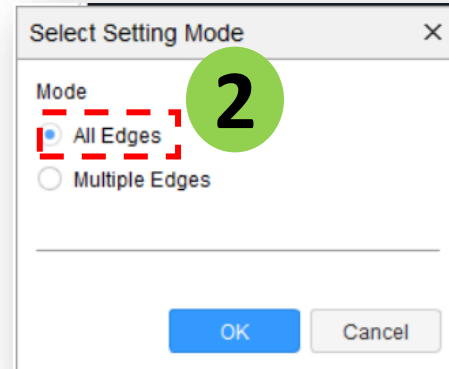
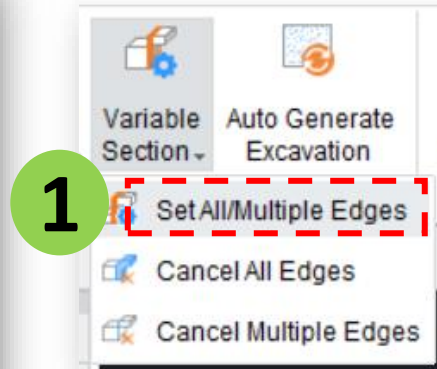
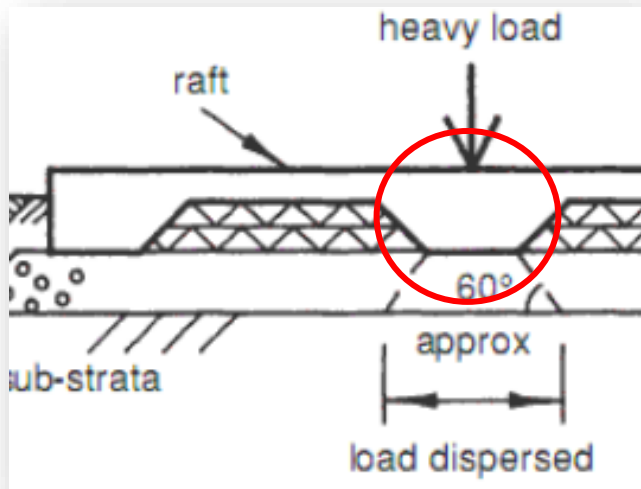
- **Step 1:** Tab {Draw}, Click [By CAD Line], generate entities by picked CAD lines.
- **Step 2:** Select CAD drawing lines to form a closed area
- **Step 3:** Click[OK]



5.8b Draw Raft

To do cross section

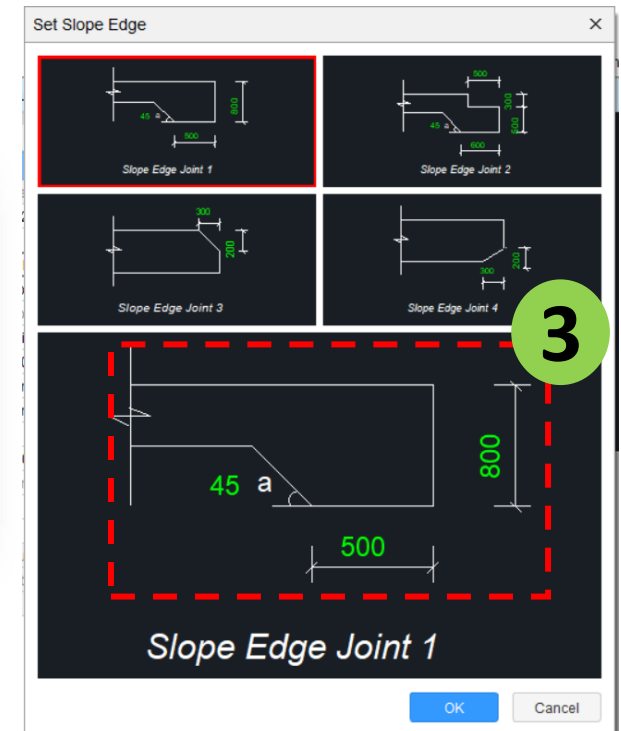
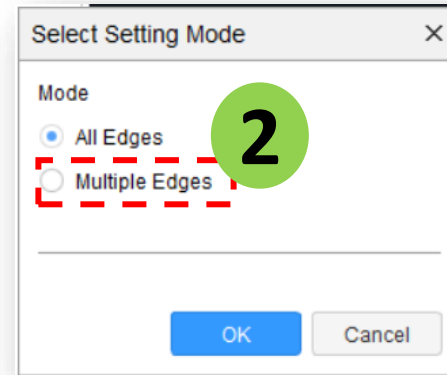
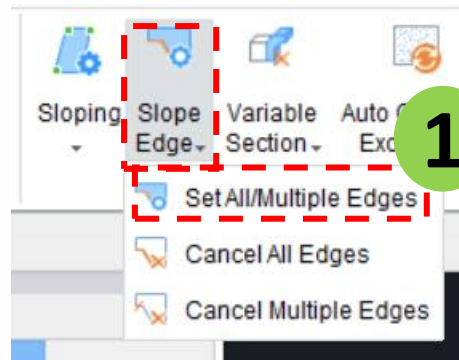
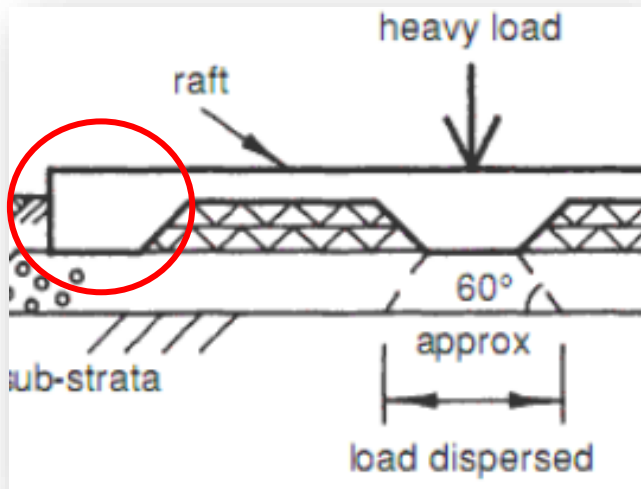
- **Step 1:** Tab {Draw}, Select [\[Variable Section\]](#) follow by [\[Set All/ Multiple Edges\]](#)
- **Step 2:** Choose [\[All Edge\]](#) to do the cross section for all INTERSECTED edges
- **Step 3:** [Input](#) the details and click [Ok](#)



5.8b Draw Raft

To do raft thickening

- **Step 1:** Tab {Draw}, Select [Slope Edge] follow by [Set All/ Multiple Edges]
- **Step 2:** Choose [Multiple Edge] to do the thickening at selected edge(s)
- **Step 3:** Input the details and click **Ok**



5.4c Quantity of Raft Foundation

Notes:

Which quantity to extract for RAFT FOUNDATION

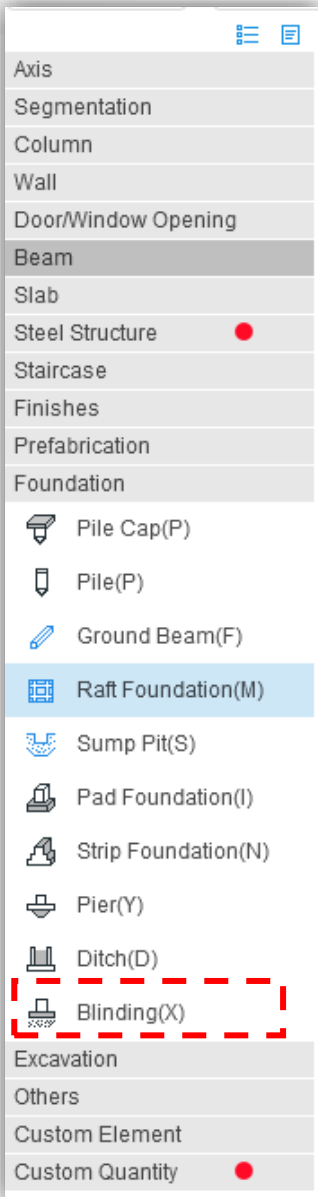
Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume
Formwork (m2)	Area of Formwork

	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	$(92.776 \times \text{Length} \times 17.196 \times \text{Width}) \times 0.250 \times \text{Thickness}$	398.842	m3
2	Area of formwork	$54.986 \times \text{Original area of formwork}$	54.986	m2
3	Area of soffit	$92.776 \times \text{Length} \times 17.196 \times \text{Width}$	1595.366	m2
4	Area of vertical surface	$((92.776 \times \text{Length} + 17.196 \times \text{Width}) \times 2) \times 0.250 \times \text{Thickness}$	54.986	m2
5	Projected area	$92.776 \times \text{Length} \times 17.196 \times \text{Width}$	1595.366	m2
6	Weight of rebar	$398.842 \times \text{Volume} \times 50.000 \times \text{Steel ratio}$	19942.078	kg

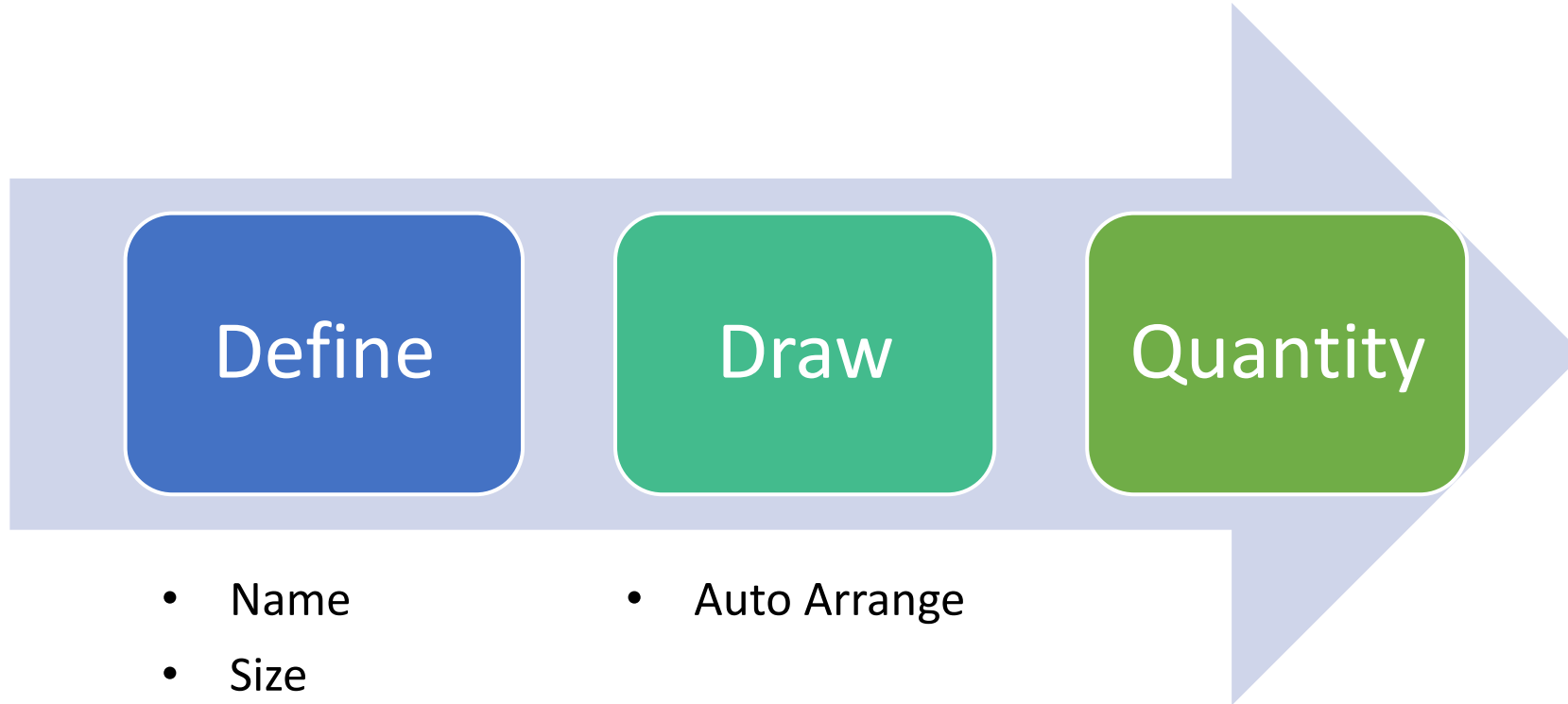
Area Type



Blinding



5.10 Blinding

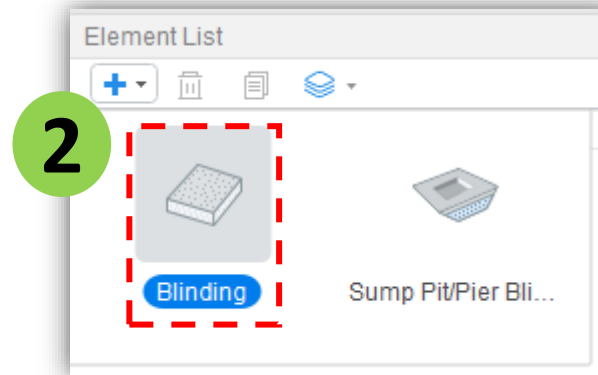
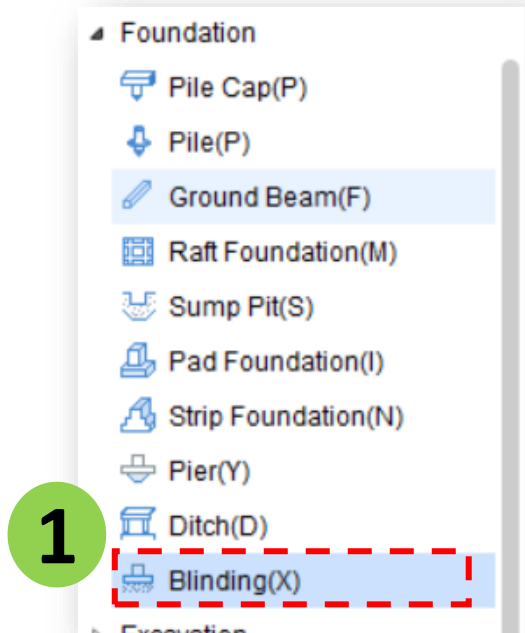


5.10 Blinding



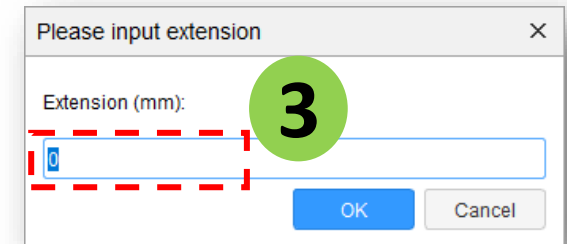
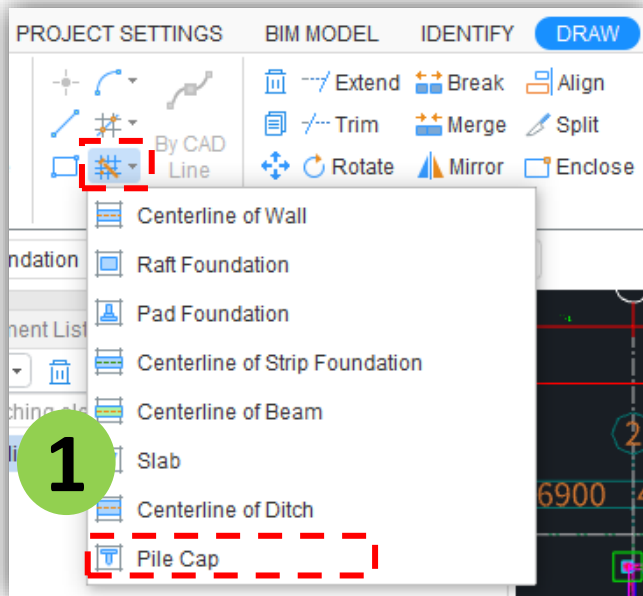
5.10a Define Blinding

- Step 1: Tab {Draw}, Select [Blinding] in Element List
- Step 2: Define a [New Blinding]



5.10b Draw Blinding

- Step 1: Tab {Draw}, Select [Auto Arrange] by Pile Cap
- Step 2: Select Pile Cap(s) & right click
- Step 3: Input extension if any



5.4c Quantity of Blinding

Notes:

Which quantity to extract for BLINDING

Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume
Formwork (m2)	Area of Formwork

	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	$92.976 \times \text{Length} \times 17.396 \times \text{Width} \times 0.100 \times \text{Thickness}$	161.740	m3
2	Area of formwork	$(92.976 \times \text{Length} + 17.396 \times \text{Width}) \times 2 \times 0.100 \times \text{Thickness}$	22.074	m2
3	Area of soffit	$92.976 \times \text{Length} \times 17.396 \times \text{Width}$	1617.401	m2
4	Weight of rebar	$161.740 \times \text{Volume} \times 20.000 \times \text{Steel ratio}$	3234.801	kg

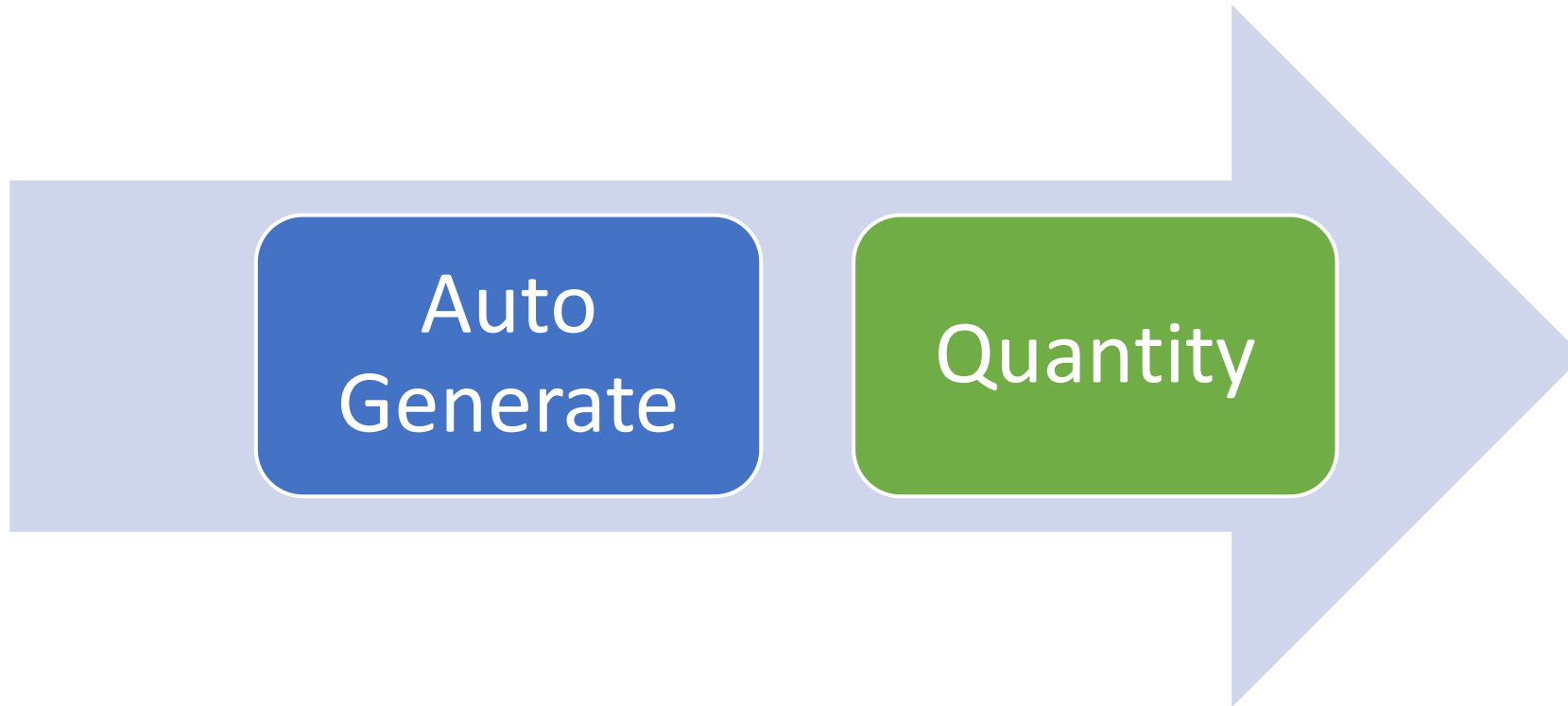
Area Type



Excavation

Axis
Segmentation
Column
Wall
Door/Window Opening
Beam
Slab
Steel Structure ●
Staircase
Finishes
Prefabrication
Foundation
Excavation
● Heavy Excavation(H)
● Trench Excavation(T)
● Pit Excavation(D)
● Room Backfill(B)
Others
Custom Element
Custom Quantity ●

5.11 Excavation



5.11 Excavation

Type of Excavation



Pit Excavation



Trench Excavation



Heavy Excavation

5.11a Generate Excavation

- Step 1: Tab {Draw}, remain at blinding, select [Auto Generate Excavation]
- Step 2: Choose excavation type
- Step 3: Input all data & Click Ok

1

2

3

Generation Mode and Related Attribute

Excavation Type

☒ Pit Excavation ☐ Trench Excavation ☐ Heavy Excavation

Excavation-Related Attribute

Unit Depth in Stages (D) 3.000 (m)

Width of Working Space (S) 500 (mm)

Slope Input Method (a) Slope Angle 60.00

Slope Position

☒ Blinding Soffit ☐ Blinding Top

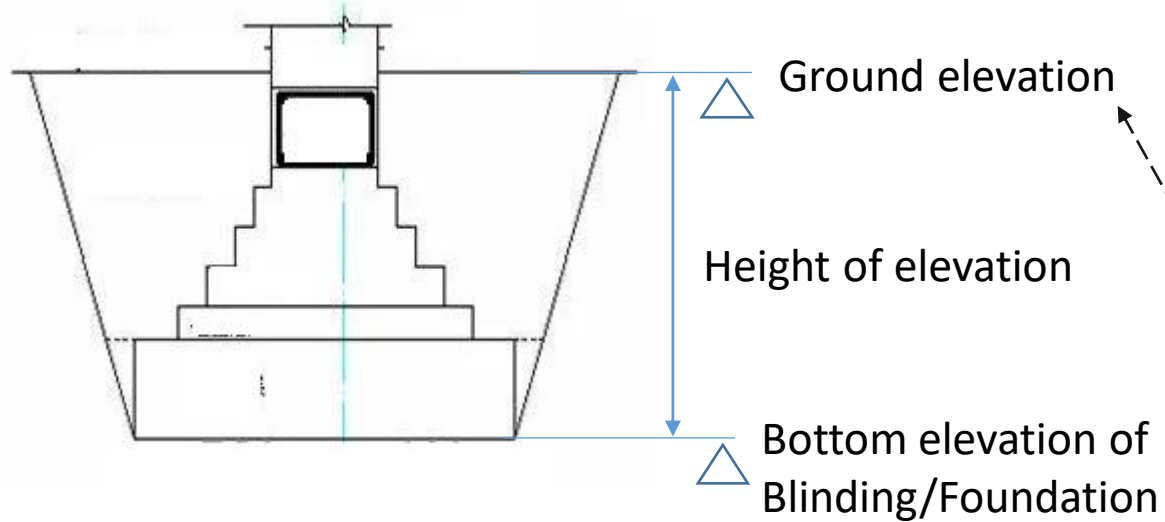
Generation Mode

☒ Auto Mode ☐ Manual Mode

Advanced Settings ↓

OK Cancel

5.11a Generate Excavation



Cubicost TAS C-III (TIO) - [Project1]

START PROJECT SETTINGS BIM MODEL IDENTIFY DRAW VIEW QUANTITY REVISION Tell me (Ctrl+Alt+E)

Project Information Floor Settings

	Attribute	Value
1	☐ Project Information	
2	Project Name:	Project1
3	Measurement Rules:	Indonesian Standard Method of Measurement of Building Works
4	Project Code:	
5	Project Type:	
6	Structure Type:	
7	Foundation Type:	
8	Building Feature:	
9	Number of Underground Floors:	1
10	Number of Overground Floors:	1
11	Eave Height (m):	0.000
12	Floor Area (m2):	(0.000)
13	Ground Elevation (m):	0.500

5.4c Quantity of Excavation

Notes:

Which quantity to extract for EXCAVATION

Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume of excavating; Volume of disposal

Pit Excavation : PE(<=0.850)-1			
Volume of excavating	1374.790	m3	
Volume of plain soil backfill	814.209	m3	
Volume of disposal	560.582	m3	
Area of soffit	1617.401	m2	
Area of side	187.632	m2	
Area of retaining board	187.632	m2	

Point Type

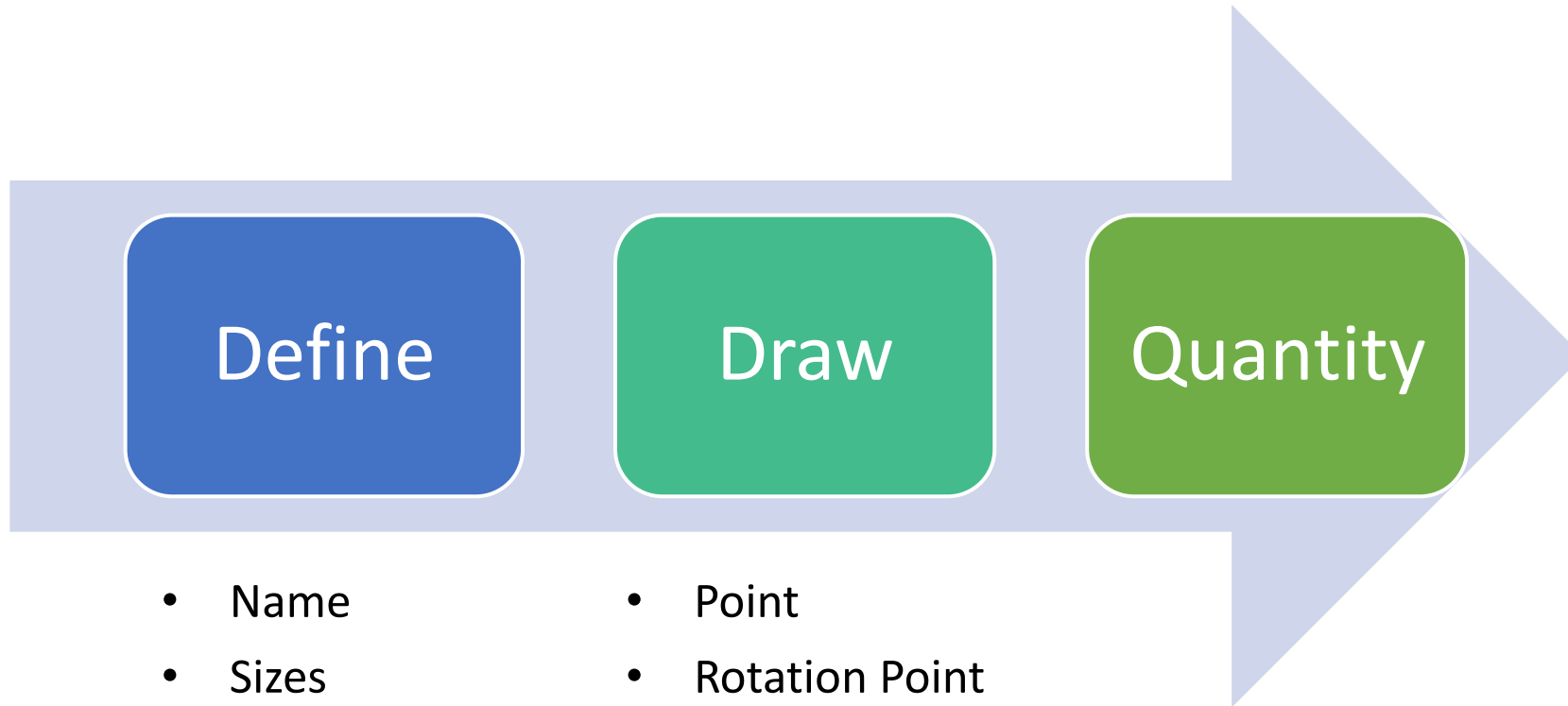
Axis
Segmentation
Column
 Column(C)
 Stiffener(S)
 Corbel(E)
Wall
Door/Window Opening
Beam
Slab
Steel Structure ●
Staircase
Finishes
Prefabrication
Foundation
Excavation
Others
Custom Element
Custom Quantity ●



Column



5.1(i) Column (Option 1)



- Name
- Sizes
- Material

- Point
 - Rotation Point
 - Slanted Column
- * F4 to change insert point

5.1 Column

Type of Column



Round Column



Composite Column

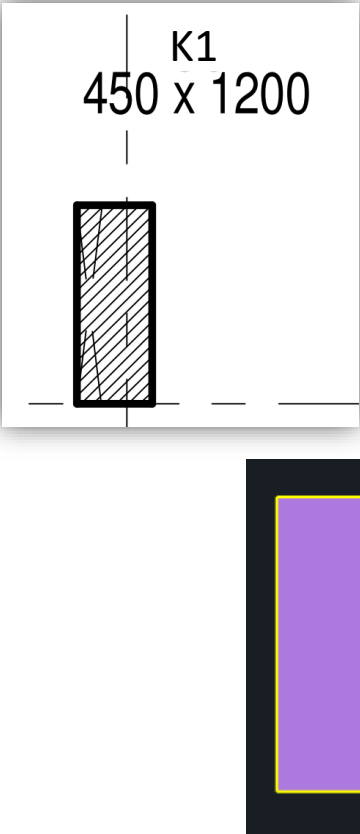


Steel Column



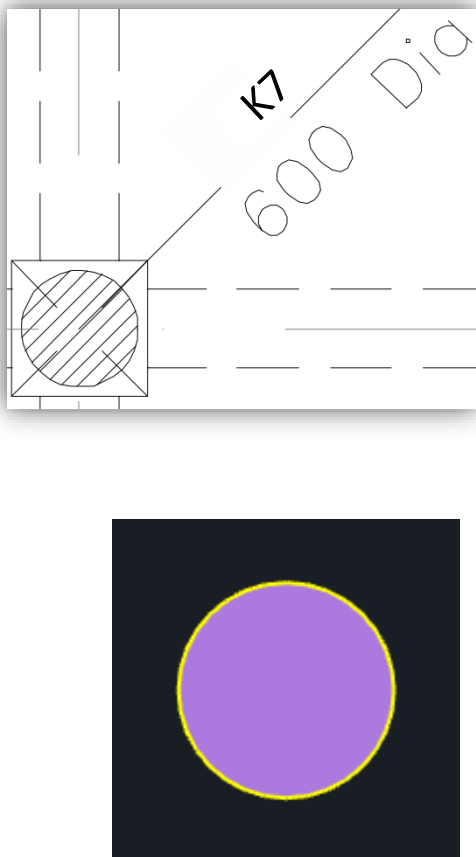
Slanted Column

5.1a Define Column



Attribute	Value	Add
Common Attribute		
Name	K1	
Material	In-situ Concrete	☐
Section Width (mm)	450	☐
Section Height (mm)	1200	☐
Top Elevation (m)	Floor_Top_Elevation	☐
Bottom Elevation (m)	Floor_Bottom_Elevati...	☐
Concrete Grade	(30.00)	☐
Formwork Type	(Common Formwork)	☐
Entity Type	(Vertical)	☐
Category 1	Frame Column	☐
Category 2		☐
Concrete Type	(Common Concrete)	☐
Steel Ratio (kg/m3)	(150.000)	☐

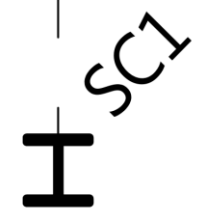
Rectangular Column



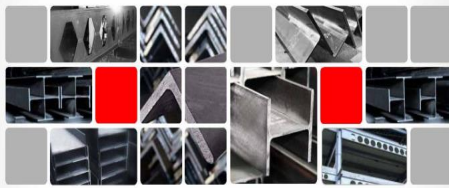
Attribute	Value	Add
Common Attribute		
Name	K7	
Material	In-situ Concrete	☐
Radius (mm)	300	☐
Top Elevation (m)	Floor_Top_Elevation	☐
Bottom Elevation (m)	Floor_Bottom_Elevati...	☐
Concrete Grade	(30.00)	☐
Formwork Type	(Common Formwork)	☐
Entity Type	(Curved)	☐
Category 1	Frame Column	☐
Category 2		☐
Concrete Type	(Common Concrete)	☐
Steel Ratio (kg/m3)	(150.000)	☐

Round Column

5.1a Define Column (cont'd)

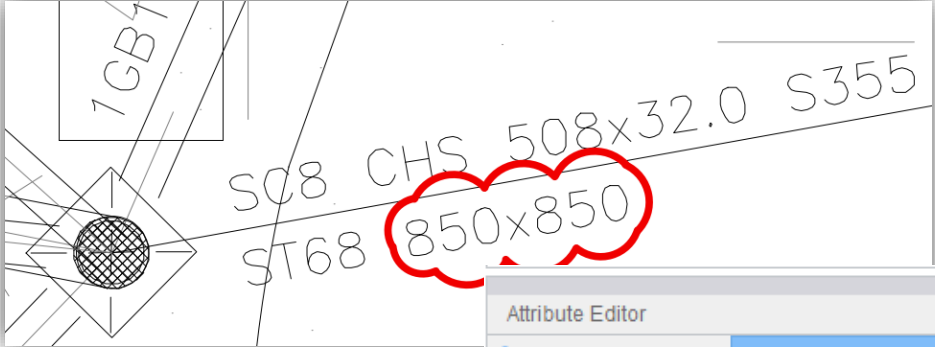


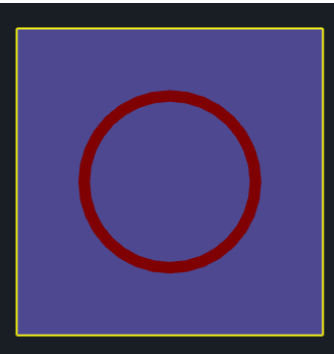
MARK	SIZE
SC1	356 x 406 x 393 kg/m UC



Product Catalogue

Attribute	Value
Common Attribute	
Name	SC1
Category	Steel Column
Section Width (mm)	407
Section Height (mm)	419
Steel Section Shape	Standard
Spec Code/Section	UC 356*406*393
Theoretical Weight	393.00
Number of Allowances	1
Fixing Percentage	(0)
Top Elevation (m)	Floor_Top_Elevation
Bottom Elevation (m)	Floor_Bottom_Elevation







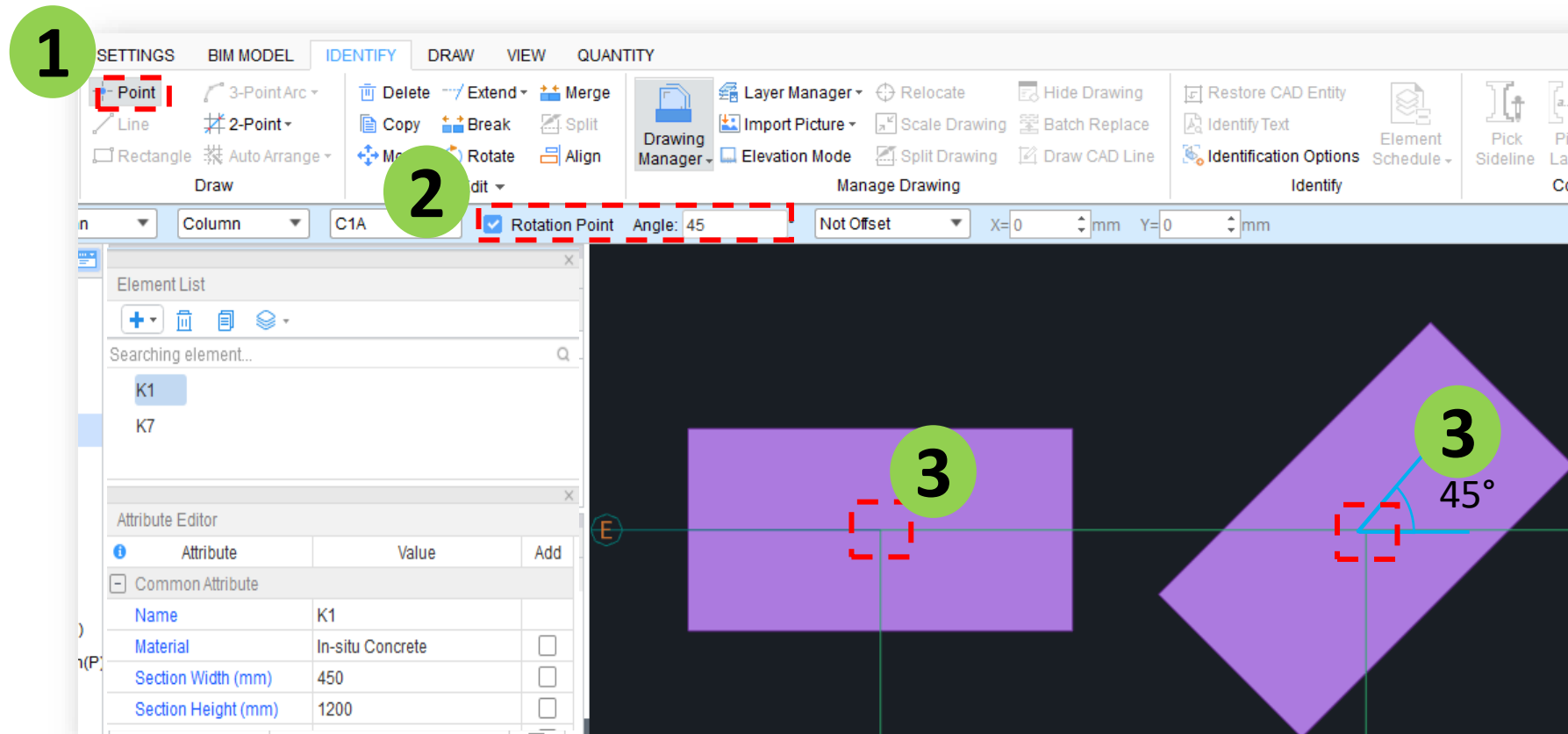
Attribute	Value
Common Attribute	
Name	SC8 & ST68
Category	Encased Composite Column
Section Width (mm)	850
Section Height (mm)	850
Steel Section Shape	Standard
Spec Code/Section	HOT CHS 508*32*375.64
Theoretical Weight	375.64
Number of Allowances	1
Fixing Percentage	(0)
Top Elevation (m)	Floor_Top_Elevation
Bottom Elevation (m)	Floor_Bottom_Elevation
Material	In-situ Concrete

Steel Column

Composite Column

5.1b Draw Column

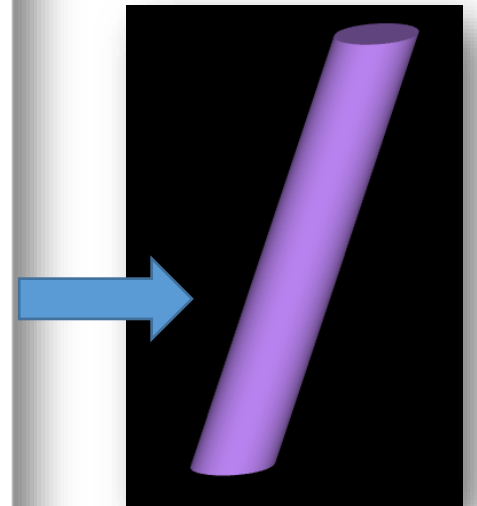
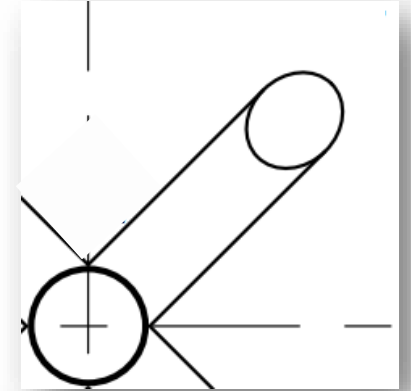
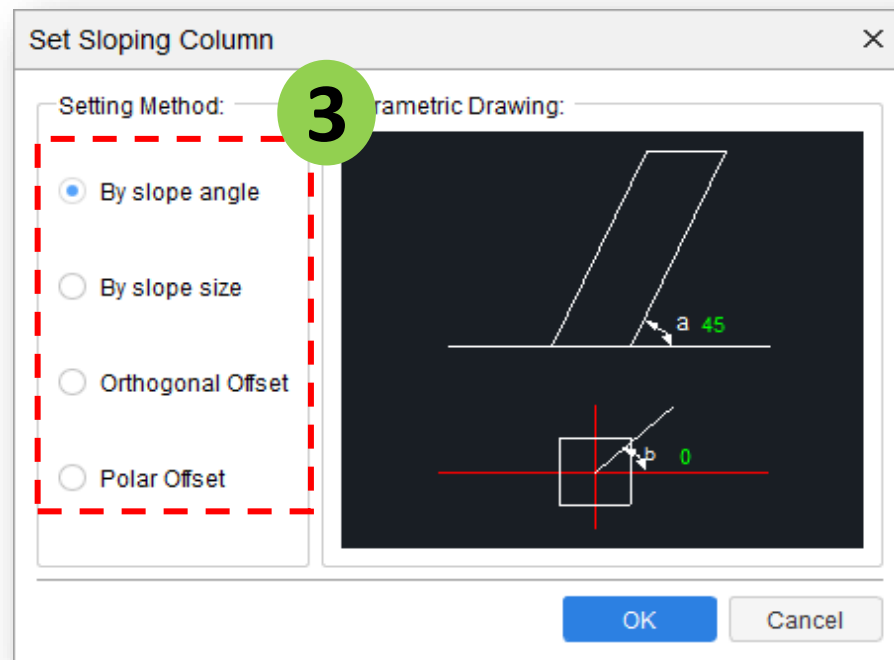
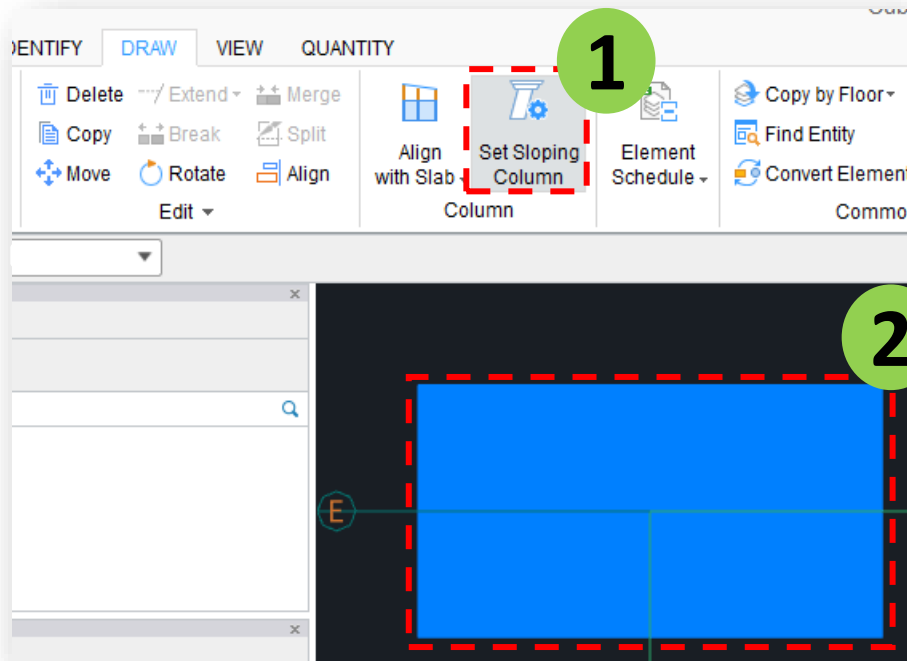
- Step 1: Tab {Draw}, Click [Point]
- Step 2: For non-right-angle column, tick on [Rotation Point] to rotate to certain degree
- Step 3: Point to the location of the column on drawing Tips: F4 to change insert point



5.1b Draw Column (cont'd)

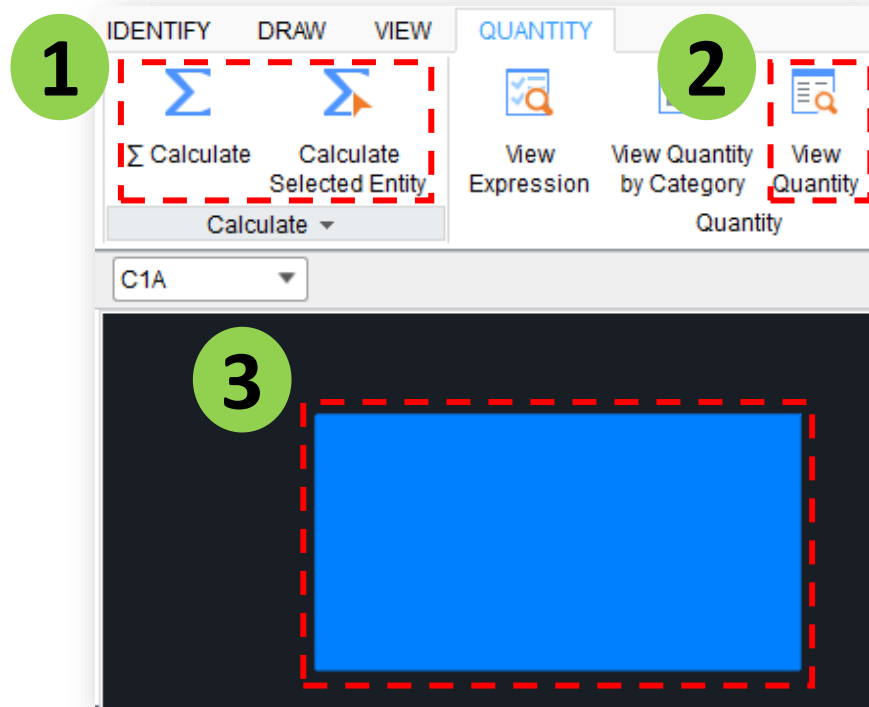
To do slanted column

- **Step 1:** Select [Set Sloping Column]
- **Step 2:** Select on 1 of the column
- **Step 3:** Select setting method



5.1c Quantity of Column

- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Click [View Quantity]
- Step 3: Select column(s)
- Step 4: Check column quantity * Apply to all



The screenshot shows the 'View Element Entity Quantity' dialog box. A red dashed box labeled '4' highlights the table of quantities. The table has columns for 'Floor', 'Material', 'Concrete Grade', 'Entity Type', 'Volume(m3)', 'Area of Formwork(<=3.5 m)(m2)', and 'Number(pc)'. The table contains two rows: one for '1st Floor' and one for 'Total'.

	Floor	Material	Concrete Grade	Entity Type	Volume(m3)	Area of Formwork(<=3.5 m)(m2)	Number(pc)
1	1st Floor	In-situ Concrete	C32/40	Vertical	1.425	8.700	1
2	Total				1.425	8.700	1

Below the table, there are two checkboxes: 'Show Quantities of Room and Assembly' (checked) and 'Show Subtotal' (unchecked). The text 'Only show quantities of one typical floor' is also present.

5.1c Quantity of Column (cont'd)

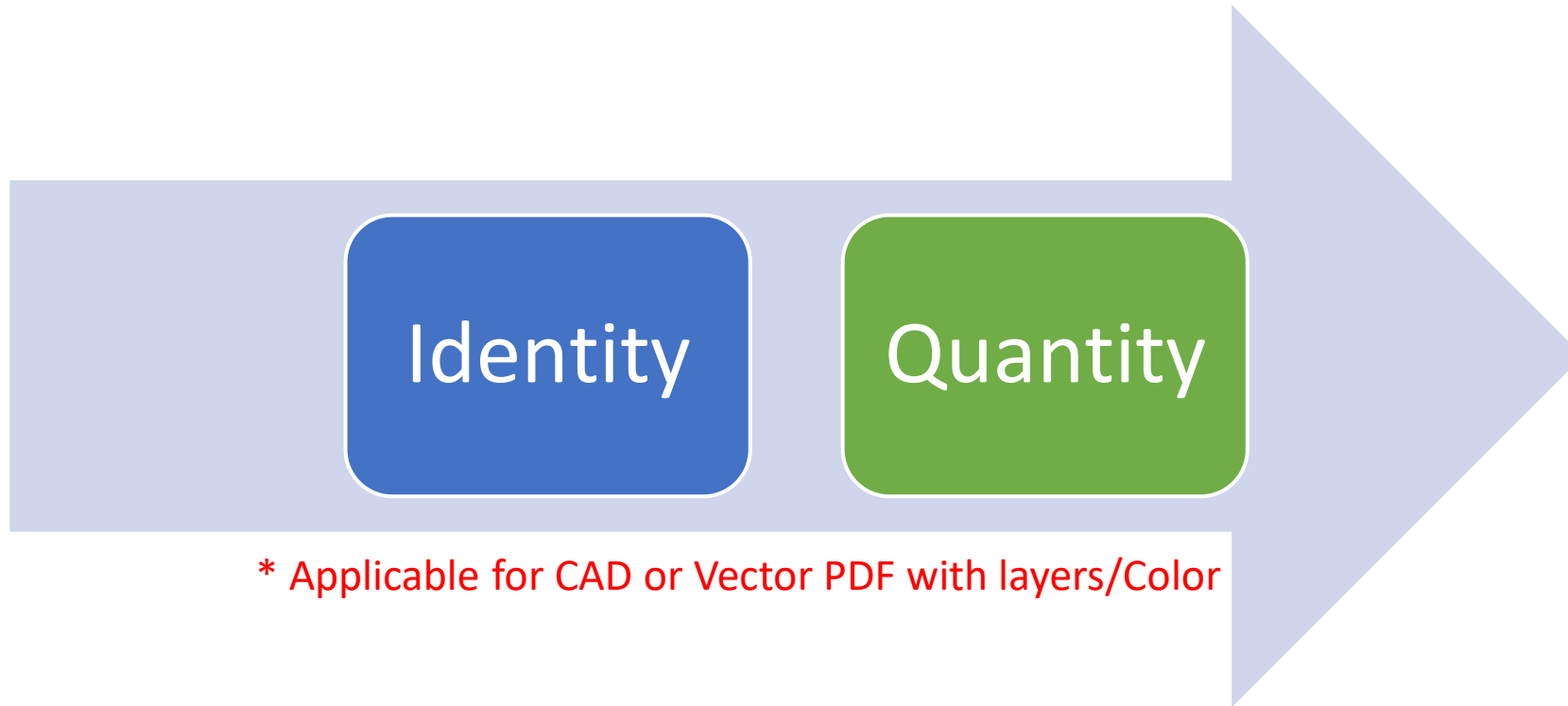
Notes:

Which quantity to extract for COLUMN

Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume
Formwork (m2)	Area of Formwork

	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	$0.450 \times \text{Length} \times 1.200 \times \text{Width} \times 3.000 \times \text{Height}$	1.620	m3
2	Area of formwork	$9.900 \times \text{Original area of formwork to column}$	9.900	m2
3	Number		1	pc
4	Weight of rebar	$1.620 \times \text{Volume} \times 150.000 \times \text{Steel ratio}$	243.000	kg
5	Girth	$(0.450 \times \text{Length} + 1.200 \times \text{Width}) \times 2$	3.300	m

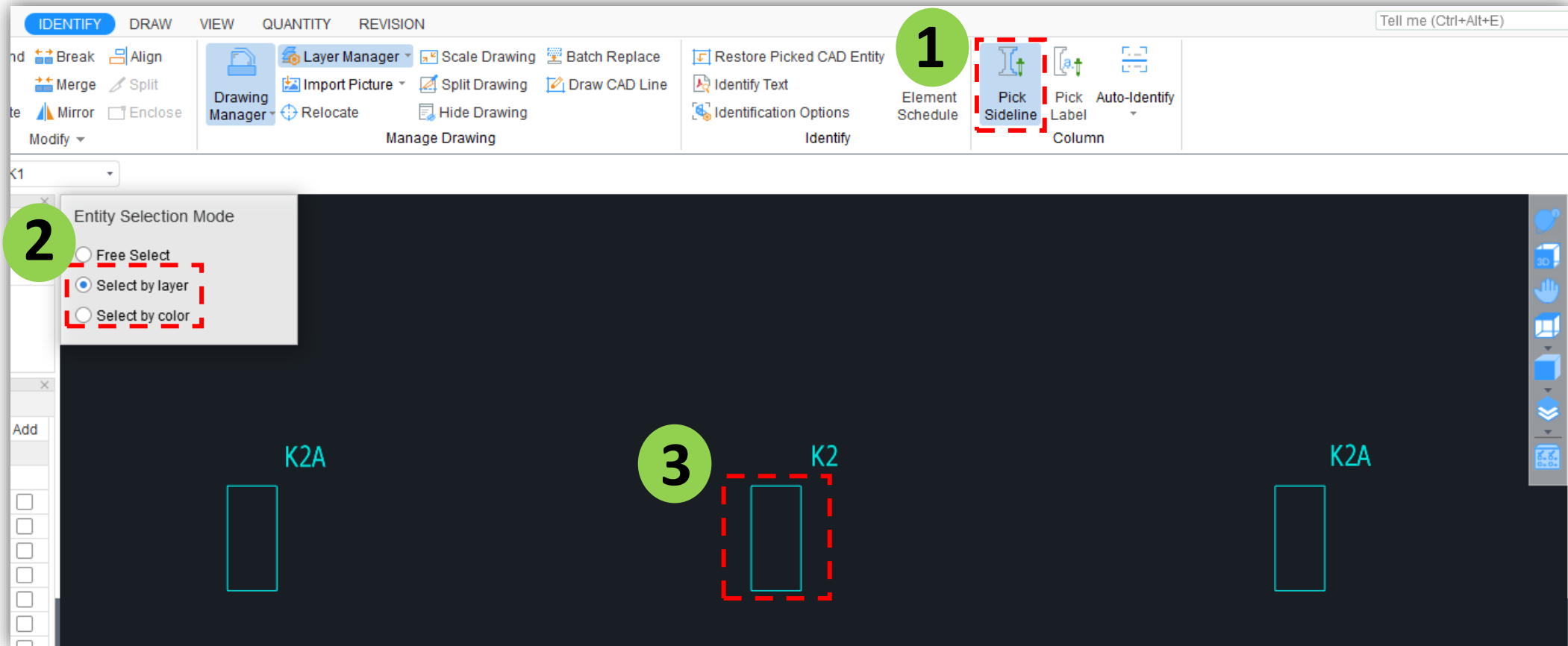
5.1(ii) Column (Option 2)



* Applicable for CAD or Vector PDF with layers/Color

5.1(ii) Identify Column – Pick Sideline

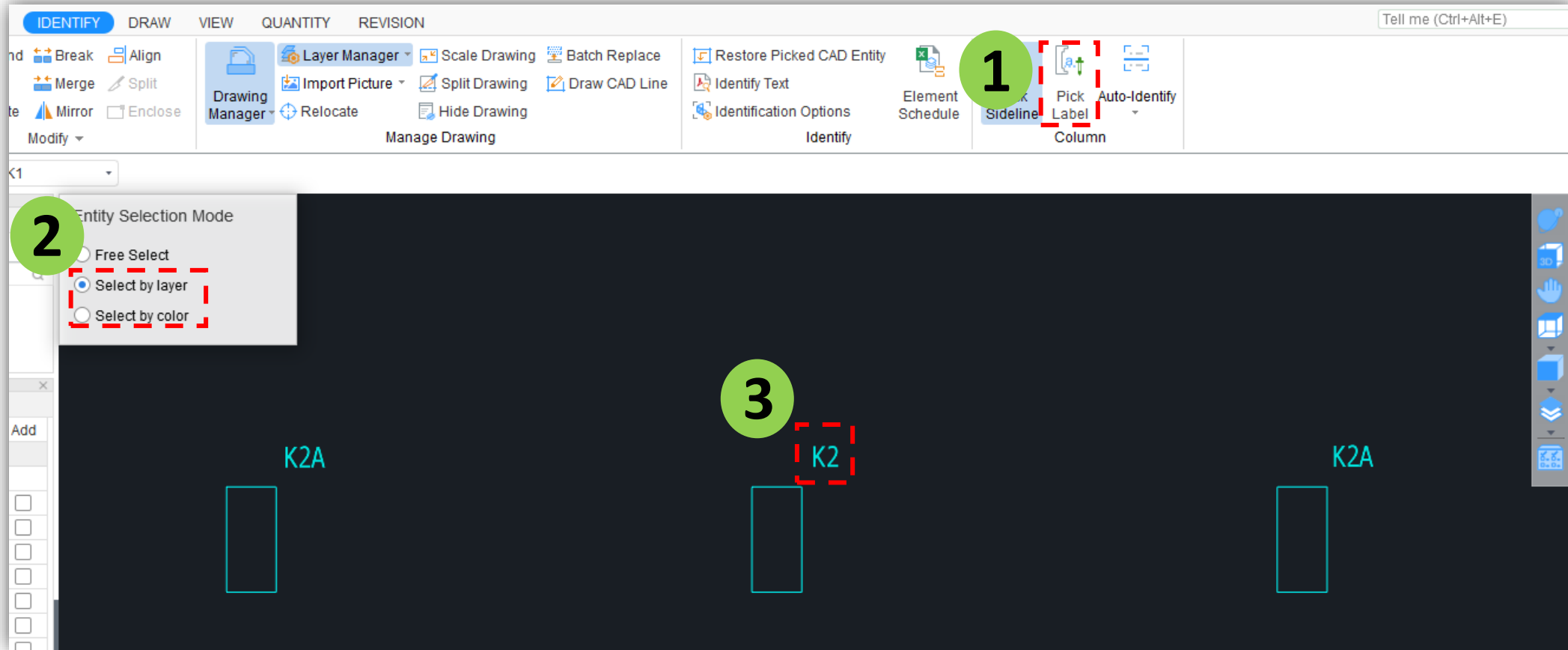
- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the frame/ side line of column & right click



Continue →

5.1(ii) Identify Column – Pick Label

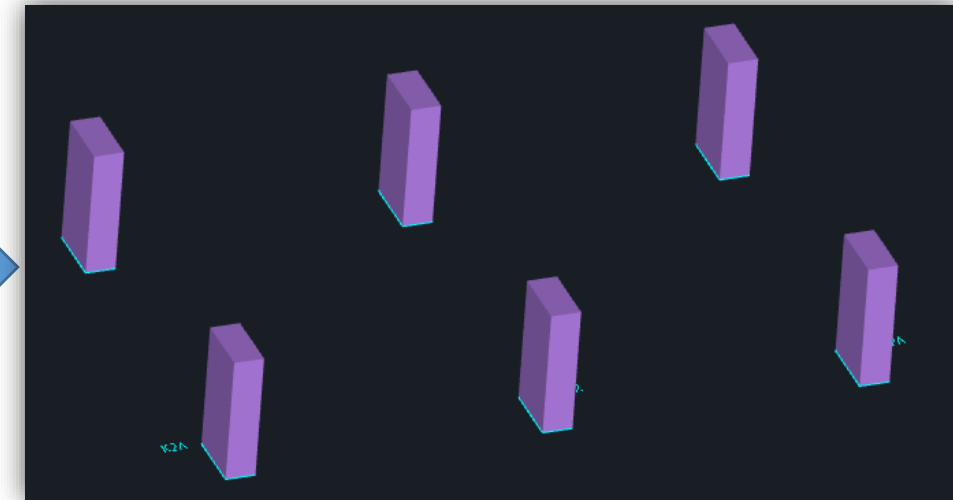
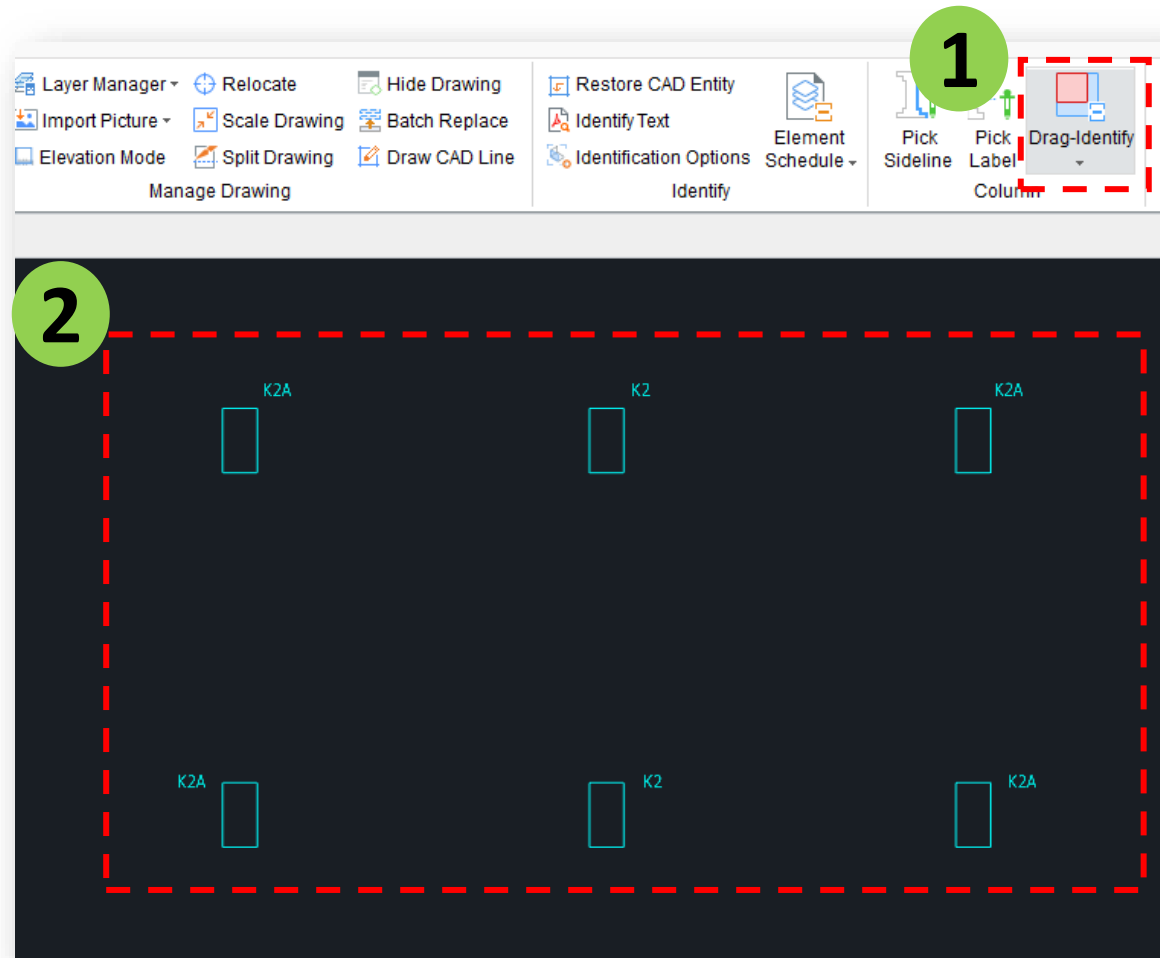
- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the name of column & right click



Continue →

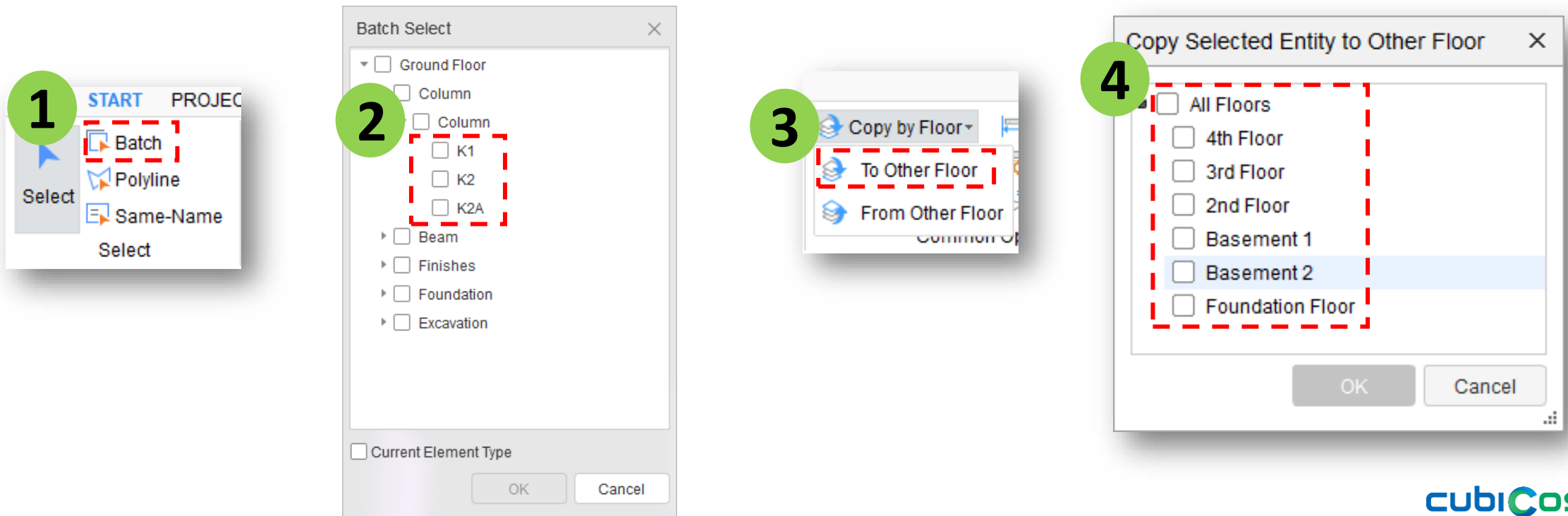
5.1(ii) Identify Column - Identify

- **Step 1:** Tab {Identify}, Select **[Auto-Identify]/ [Drag-Identify]** ← **Selected area**
- **Step 2:** **Highlight** the certain area, right click



5.1 Copy Entity to other floor

- Step 1: Tab {Draw}, Click [Batch Select] or F3
- Step 2: Tick the Entity(ies) that wish to copy
- Step 3: Select [Copy to Other Floor]
- Step 4: Select floor(s) follow by [Ok]



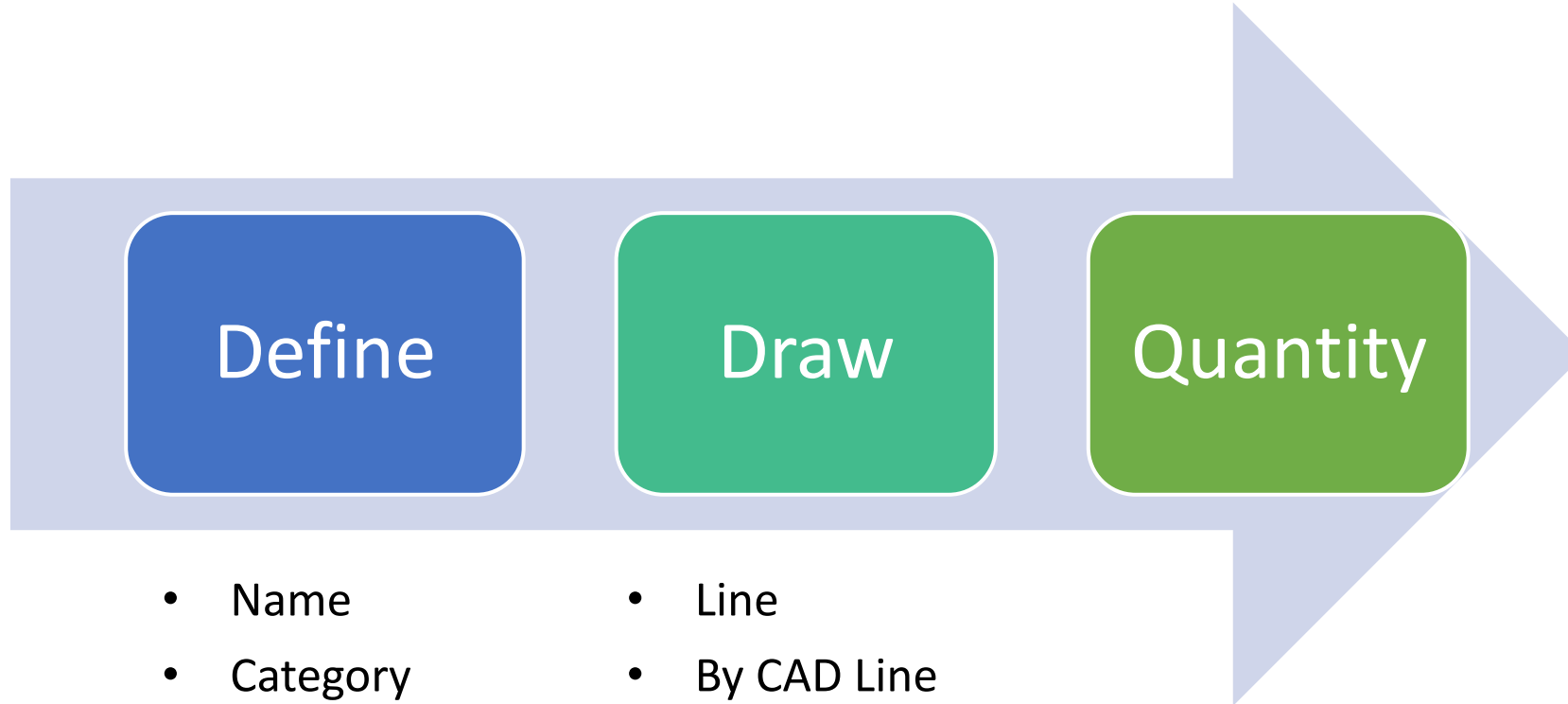
Linear Type

Wall



Axis
Segmentation
Column
Wall
 Wall(W)
 Curtain Wall(W)
 Vertical Projection(P)
 Horizontal Projectio...
Door/Window Opening
Beam
Slab
Steel Structure ●
Staircase
Finishes
Prefabrication
Foundation
Excavation
Others
Custom Element
Custom Quantity ●

5.2 Wall



- Name
- Category
- Material
- Thickness

- Line
- By CAD Line
- Rectangle
- 3 point Arc
- Sloping Wall

* F4 to change alignment

5.2 Wall

Type of Wall (Structure)



Retaining Wall



Bench



Planter Walls



5.2 Wall

Type of Wall (Architectural)



Brick Wall



Lightweight Panel Wall

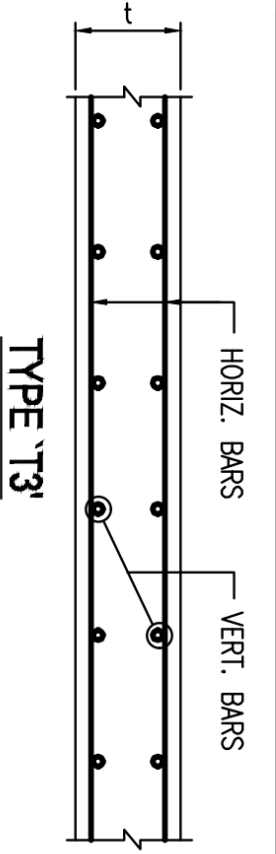


Block Wall



Glass Wall

5.2a Define Wall



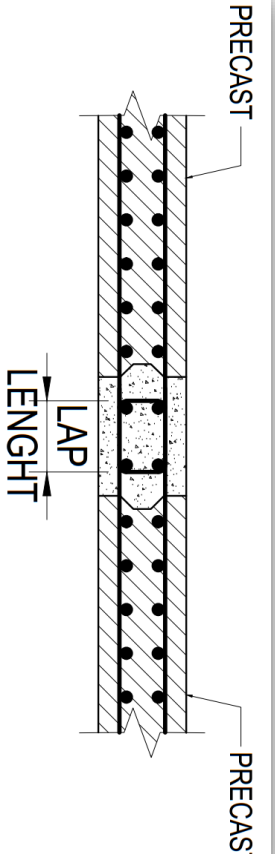
TYPE 'T3'

HORIZ. BARS

VERT. BARS

Attribute Editor	
Attribute	Value
Common Attribute	
Name	LW
Category	Structural Wall
Material	In-situ Concrete
Thickness (mm)	200
Start Top Elevati...	Floor_Top_Elevation
End Top Elevati..	Floor_Top_Elevation
Start Bottom Ele...	Foundation_Bottom_Elevation
End Bottom Ele.	Foundation_Bottom_Elevation
Axis to Left Sidel...	(100)
Interior/Exterior	Interior Wall
Concrete Grade	(C32/40)
Formwork Type	(Common Formwork)
Entity Type	(Vertical)
Entity Shape	Line
Wall Position	Above Ground

RC Wall



PRECAST

PRECAST

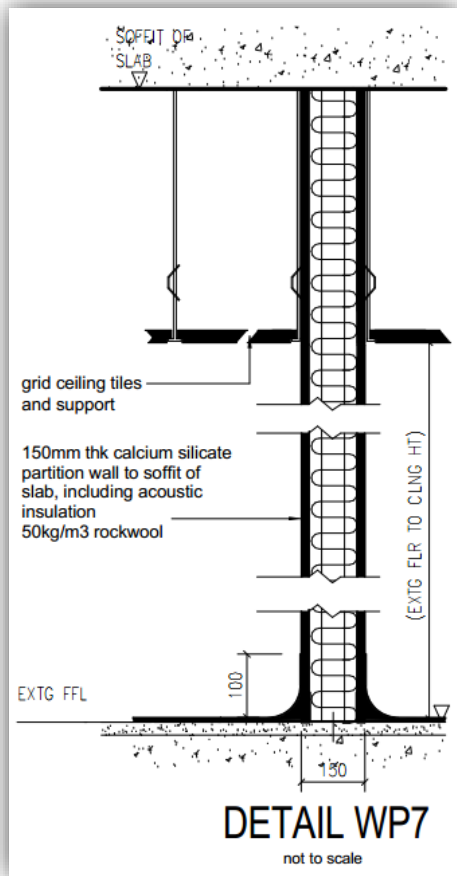
LAP

LENGTH

Attribute Editor	
Attribute	Value
Common Attribute	
Name	Precast Wall
Category	Concrete Wall
Material	Precast Concrete
Thickness (mm)	200
Start Top Elevati...	Floor_Top_Elevation
End Top Elevati..	Floor_Top_Elevation
Start Bottom Ele...	Floor_Bottom_Elevation
End Bottom Ele.	Floor_Bottom_Elevation
Axis to Left Sidel...	(100)
Interior/Exterior	Exterior Wall
Concrete Grade	(C32/40)
Entity Type	(Vertical)
Entity Shape	Line
Wall Position	Above Ground
Wall No.	

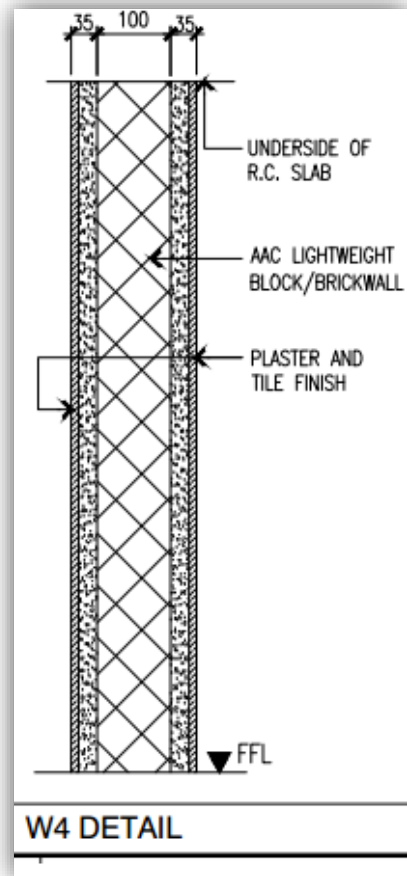
Precast Wall

5.2a Define Wall (cont'd)



Attribute	Value
Common Attribute	
Name	WP7
Category	Partition Wall
Material	Light Panel
Thicknes...	150
Start Top ...	Floor_Top_Elevation
End Top ..	Floor_Top_Elevation
Start Bott...	Floor_Bottom_Elevat...
End Botto	Floor_Bottom_Elevat...
Axis to Le...	(75)
Interior/E...	Interior Wall
Entity Type	(Vertical)
Entity Sh...	Line
Wall Posi...	Above Ground
Wall No.	

Partition Wall

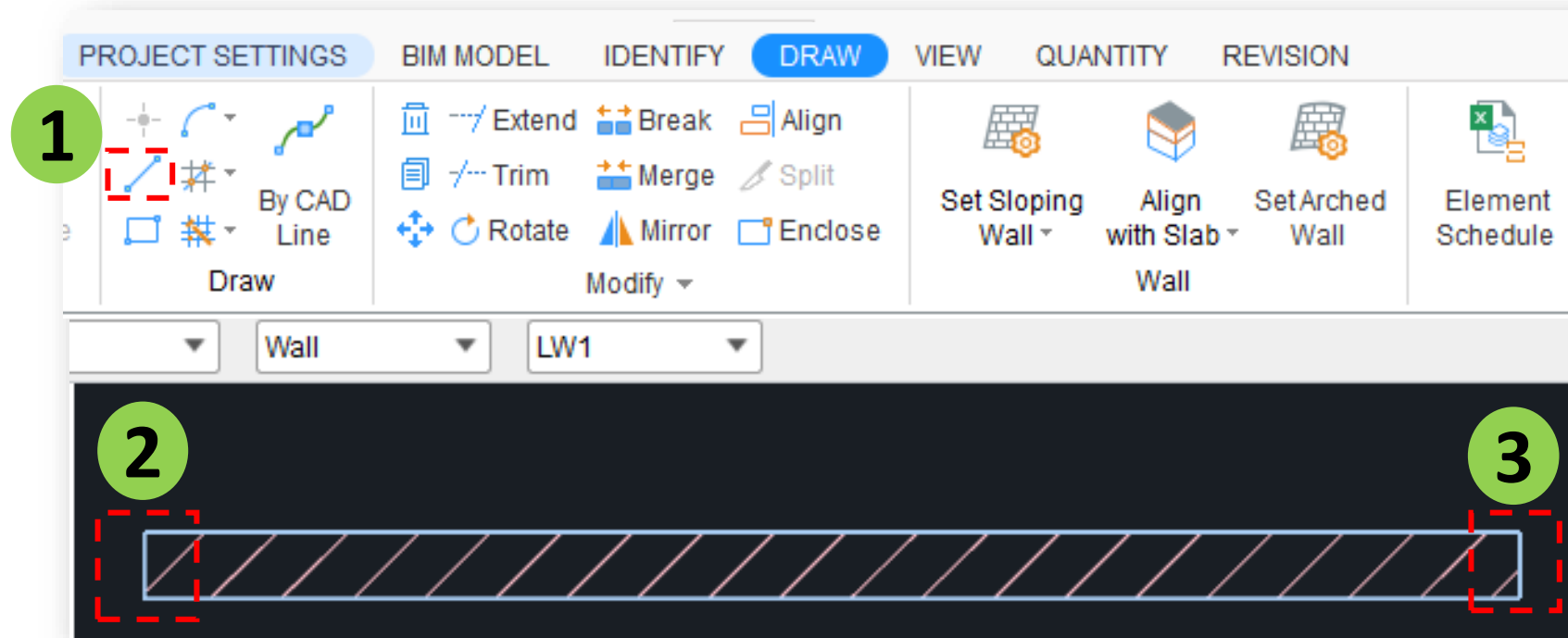


Attribute	Value
Common Attribute	
Name	W4
Category	Brick Wall
Material	Brick
Thicknes...	100
Start Top ...	Floor_Top_Elevation
End Top ..	Floor_Top_Elevation
Start Bott...	Floor_Bottom_Elevat...
End Botto	Floor_Bottom_Elevat...
Axis to Le...	(50)
Interior/E...	Interior Wall
Entity Type	(Vertical)
Entity Sh...	Line
Wall Posi...	Above Ground
Wall No.	

Brick Wall

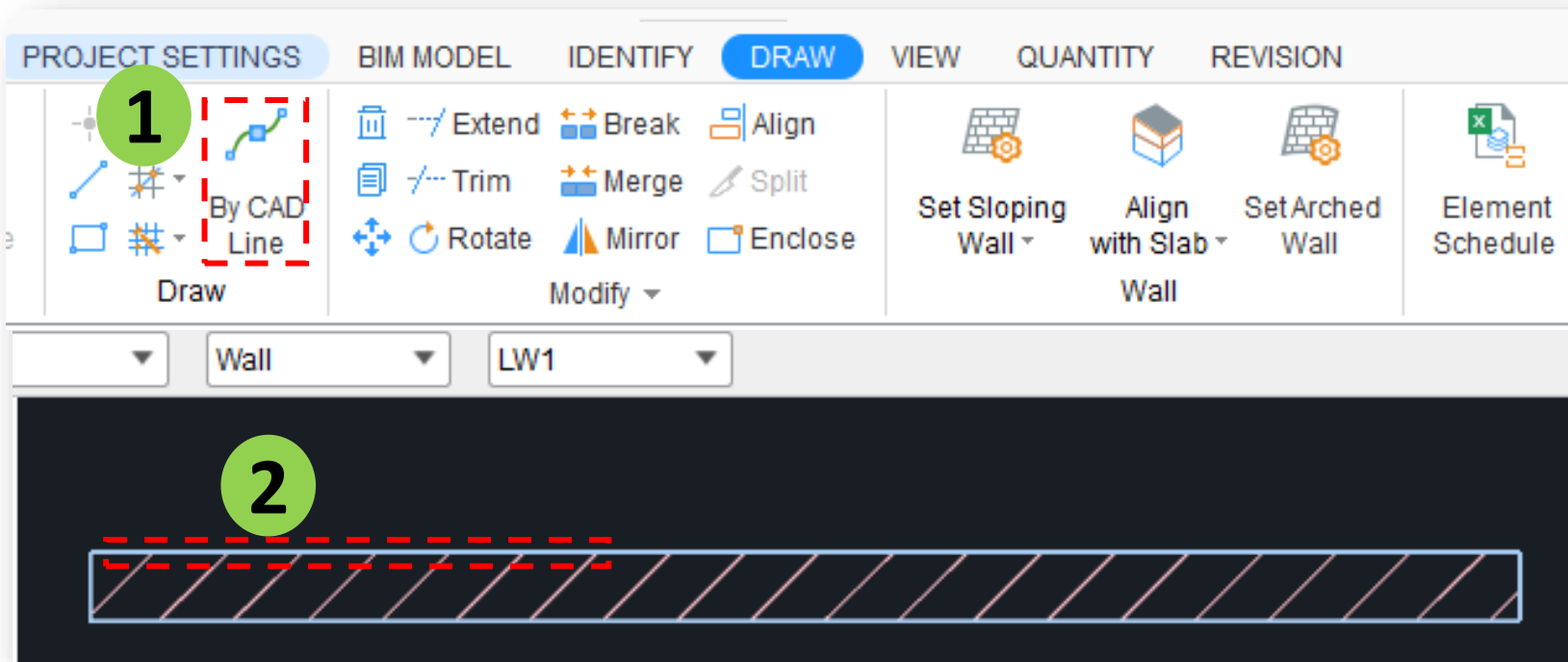
5.2b Draw Wall

- Step 1: Tab {Draw}, Click [Line] to draw a straight line
- Step 2: Begin from Start Point
- Step 3: Stop at End Point



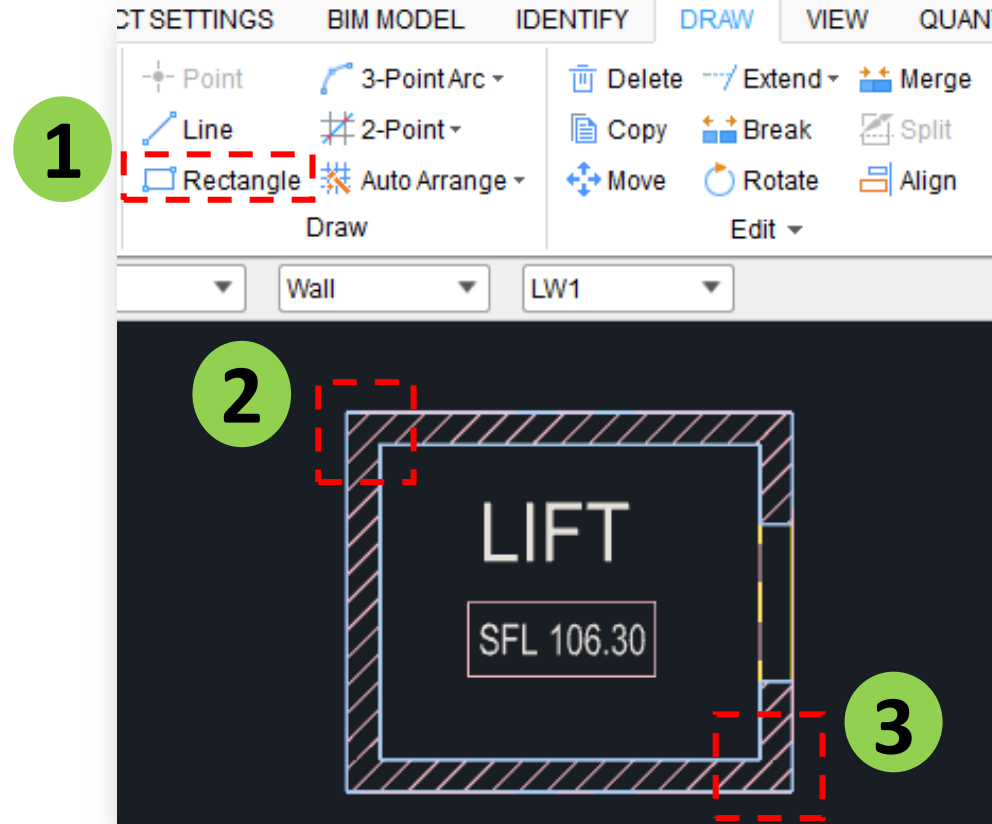
5.2b Draw Wall

- **Step 1:** Tab {Draw}, Click [By CAD Line] to draw a straight line
- **Step 2:** Select CAD line press F4 to adjust location, right click to generate entities



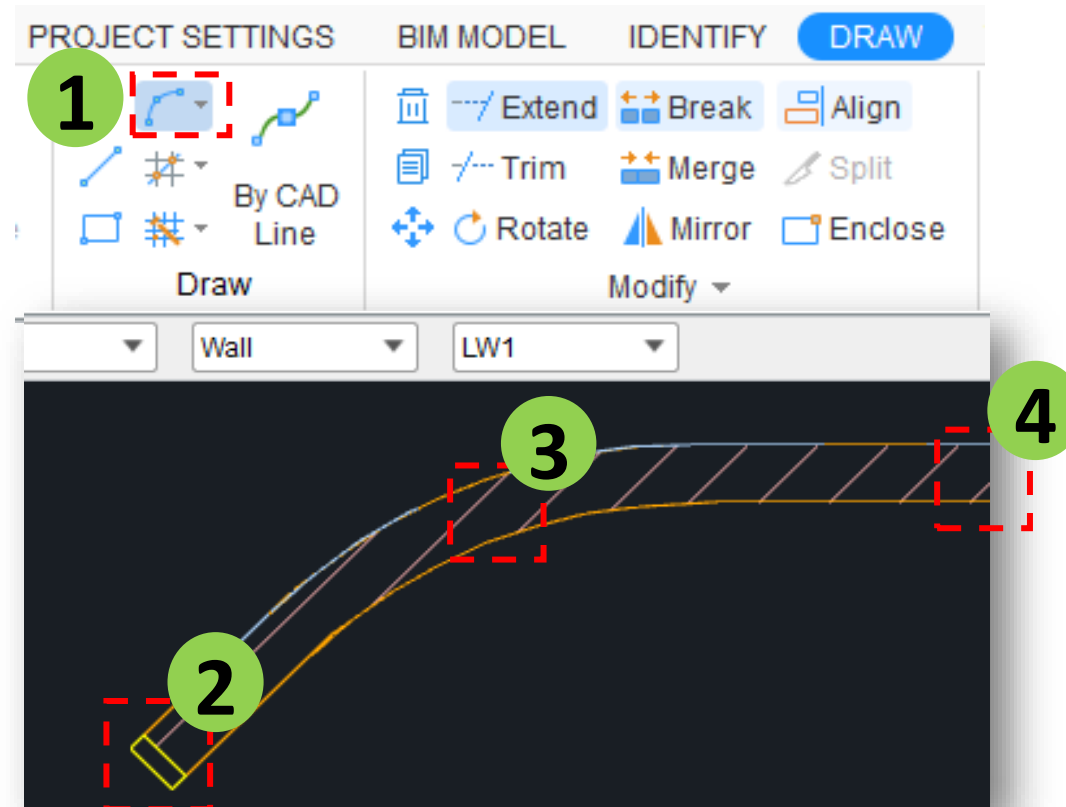
5.2b Draw Wall (cont'd)

- Step 1: Tab {Draw}, Click [Rectangle] to draw 4-sided wall
- Step 2: Begin from one Start corner
- Step 3: Stop at Diagonal corner



5.2b Draw Wall (cont'd)

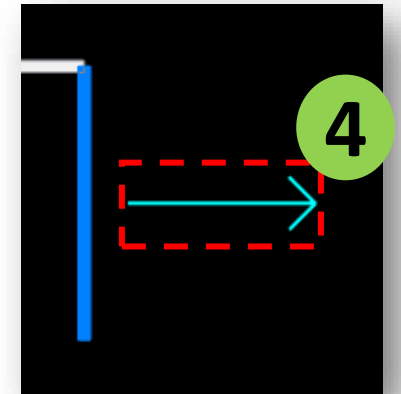
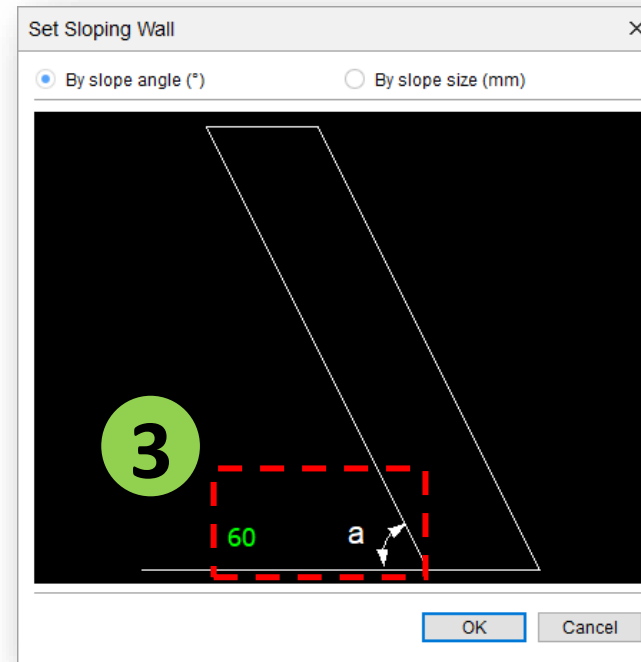
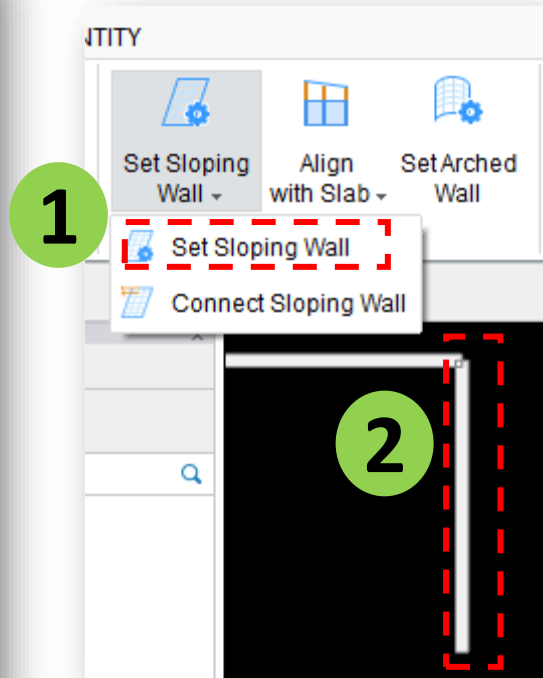
- Step 1: Tab {Draw}, Click [3-point Arc] to draw curve wall
- Step 2: Begin from Start Point
- Step 3: Continue at Mid Point
- Step 4: Stop at End Point



5.2b Draw Wall (cont'd)

To do sloping wall

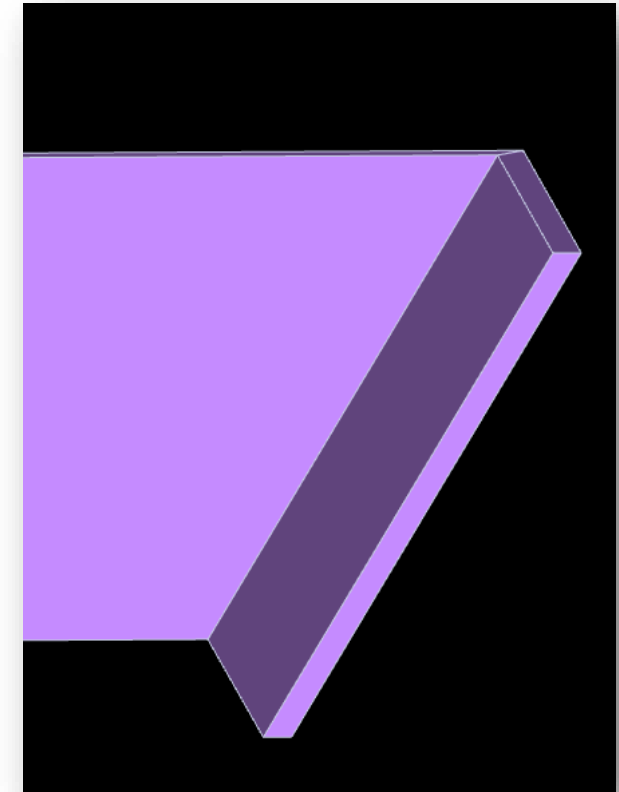
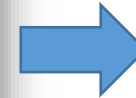
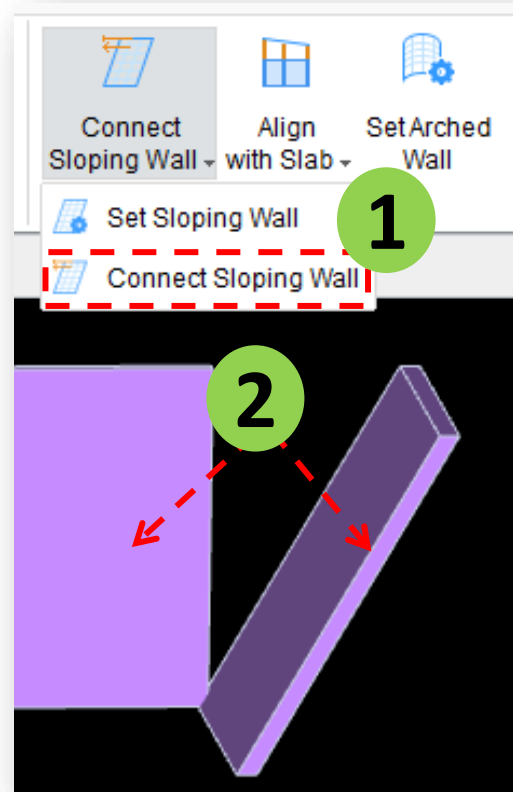
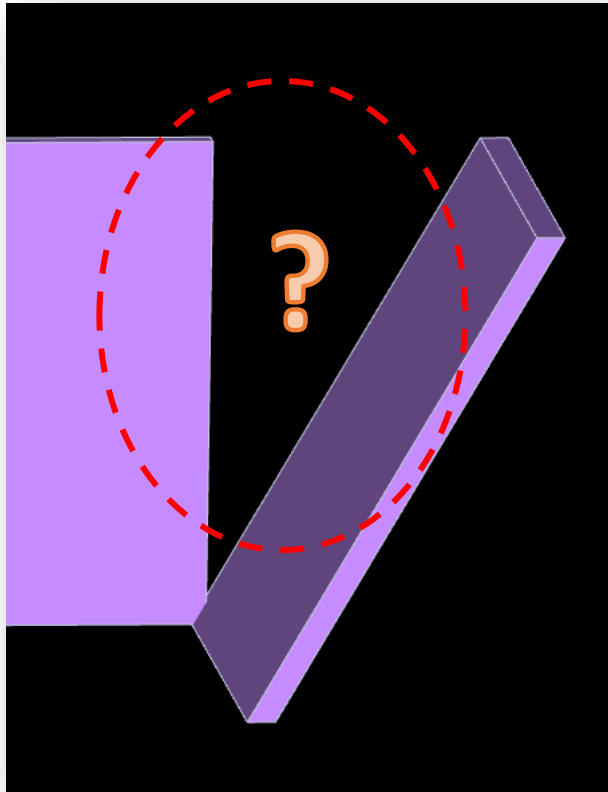
- Step 1: Tab {Draw}, Select [Set Sloping Wall]
- Step 2: Click on wall
- Step 3: Input the angle of slope
- Step 4: Choose direction of sloping



5.2b Draw Wall (cont'd)

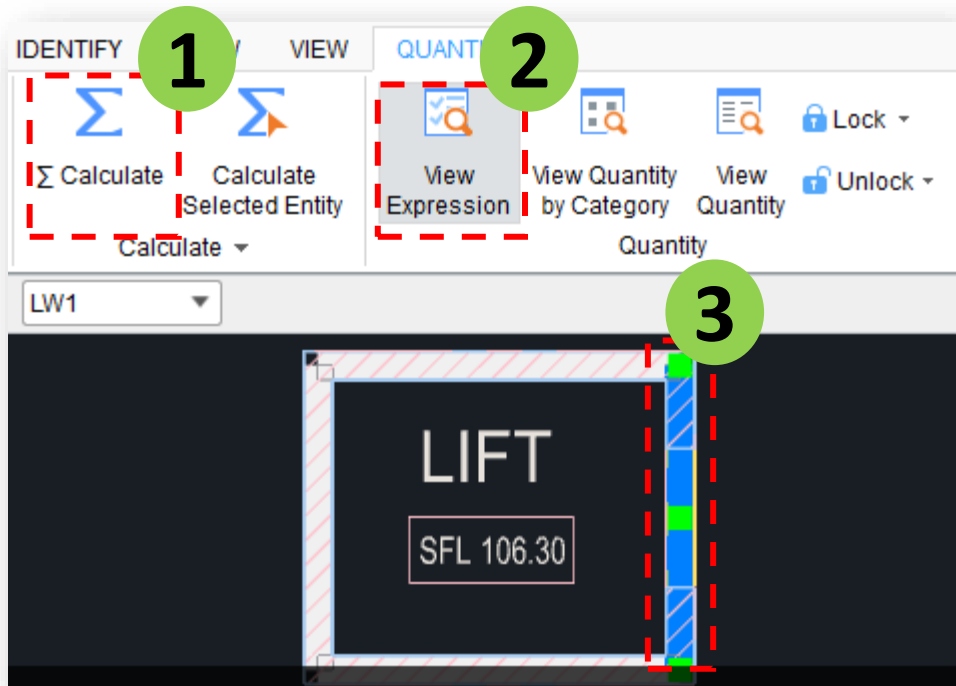
To connect sloping wall

- **Step 1:** Tab {Draw}, Select **[Connect Sloping Wall]**
- **Step 2:** Click on both **walls**



5.2c Quantity of Wall

- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Click [View Expression]
- Step 3: Select wall & check wall quantity(ies)
- Step 4: Click [3D deduction] to check in 3D * Apply to all



A red dashed box labeled '4' highlights the '3D Deduction' button in the top right corner of the table.

Element Type:	Element Name:	Quantity Name:			
	Wall-1	[All]			
	Quantity Name	Quantity Expression	Quantity	Unit	
1	Volume	11.800<Length>*3.000<Height of wall>*0.350<Thickness of wall>	12.390	m3	
2	Area of formwork	(11.450<Length of left side>+12.150<Length of right side>)*3.000<Height of formwork to wall>-2.100<Deduct wall>	68.700	m2	
3	Area	11.800<Length>*3.000<Height of wall>	35.400	m2	
4	Weight of rebar	12.390<Volume>*30.000<Steel ratio>	371.700	kg	
5	Number		1	pc	
6	Net length of wall	11.800<Original net length>	11.800	m	

5.2c Quantity of Wall (cont'd)

Notes:

Which quantity to extract for STRUCTURE WALL

Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume
Formwork (m2)	Area of Formwork
Formwork (m)	Length of formwork to Edge and Break of Opening in Stages

Quantity Name	Quantity Expression	Quantity	Unit
Volume	(11.800<Length>*3.000<Height of wall>*0.350<Thickness of ...	11.508	m3
Area of formwork	(11.450<Length of left side>+12.150<Length of right side>)*3.000<Height of formwork to wall>-5.040<Deduct door...	63.660	m2
Length of formwork to edge and break of opening in stages(0.25~0.5m)		5.400	m
Area	(11.800<Length>*3.000<Height of wall>)-2.520<Deduct door>	32.880	m2
Weight of rebar	11.508<Volume>*30.000<Steel ratio>	345.240	kg

5.2c Quantity of Wall (cont'd)

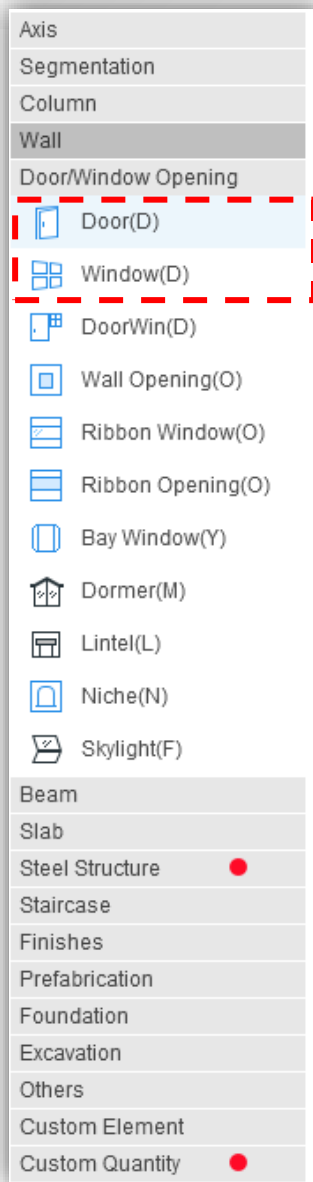
Notes:

Which quantity to extract for ARCHITECTURAL WALL

Quantity you need	Quantity to extract from Glodon	
Area (m2)	Area	

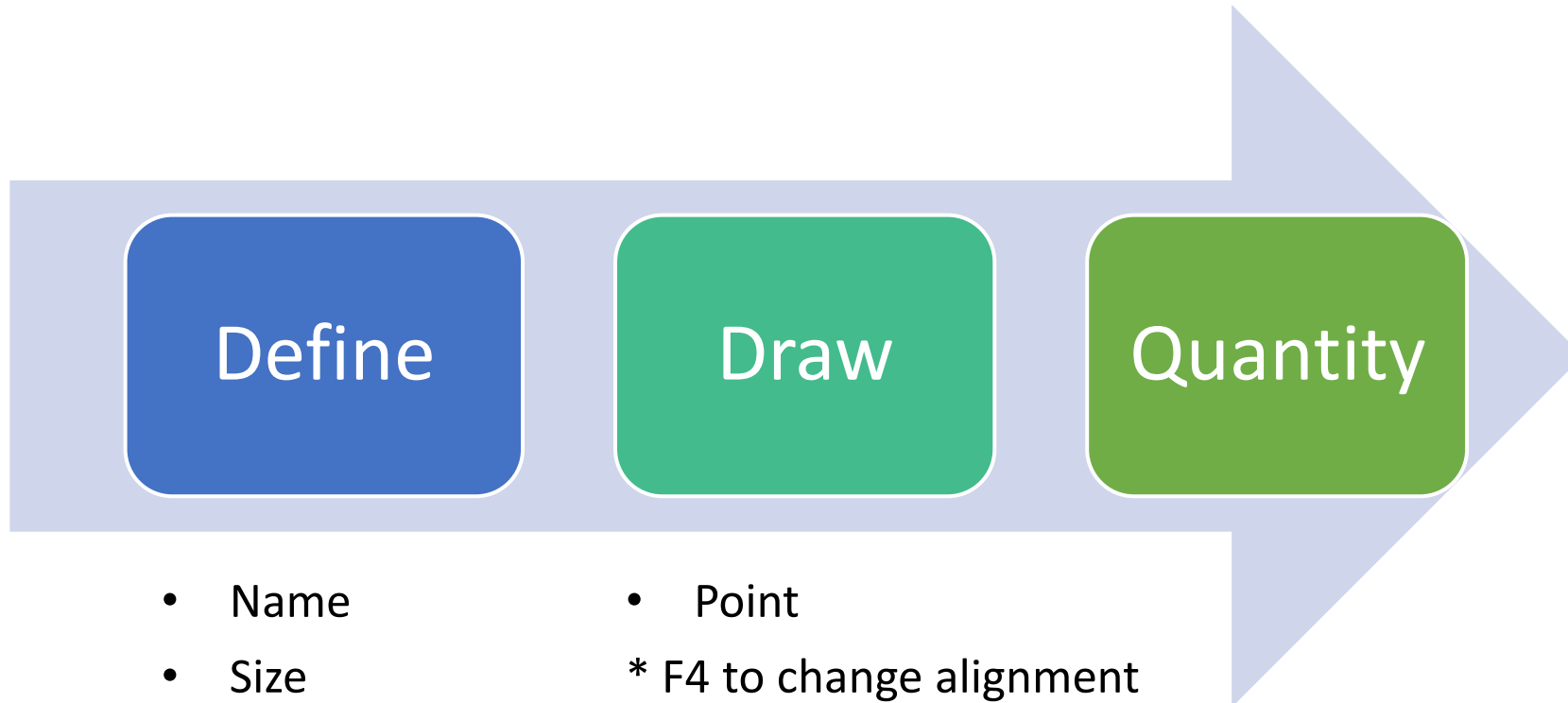
	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	$(15.126 \times \text{Length} \times 3.000 \times \text{Height of Wall} \times 0.230 \times \text{Thickness of Wall}) - 0.414 \times \text{Deduct column} - 2.673 \times \text{Deduct beam}$	7.350	m3
2	Area	A	$(15.126 \times \text{Length} \times 3.000 \times \text{Height of Wall}) - 1.800 \times \text{Deduct column} - 11.620 \times \text{Deduct beam}$	31.956	m2
3	Number	N		1	pc
4	Net Length of Wall	NLW	$15.126 \times \text{Original Net Length} - 0.600 \times \text{Deduct column}$	14.526	m
5	Original Thickness of Wall	OTW		0.230	m
6	Original Height of Wall	OHW		3.000	m

Point Type



Door & Window

5.3 Door & Window Opening



- Name
 - Size
 - Identify from PDF/ Excel
- Point
 - * F4 to change alignment

5.3 Door & Window Opening

- Type of Door



Timber door



Fire Door

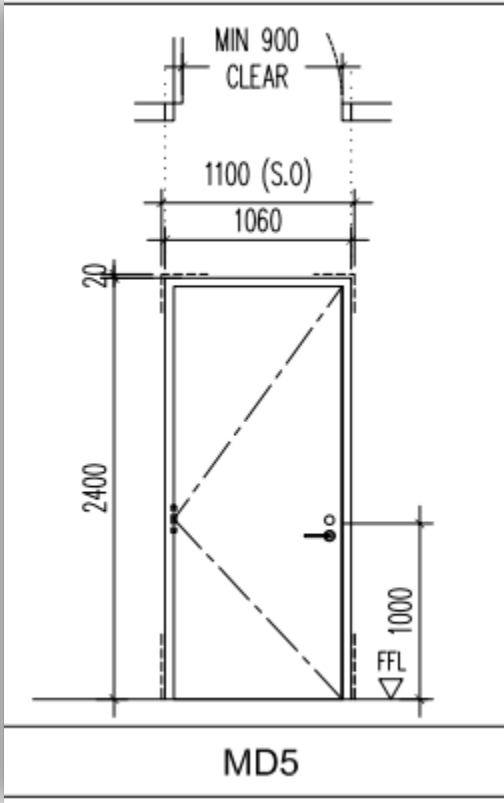


Glass Door



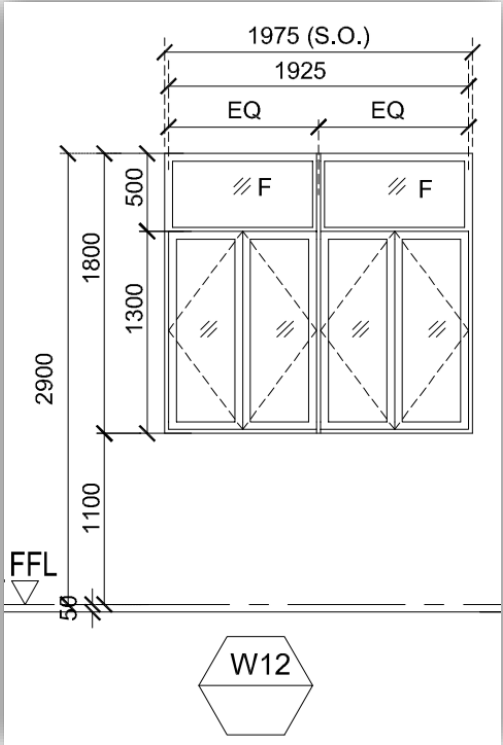
Aluminum Door

5.3a Define Door/ Window



Attribute Editor	
Attribute	Value
Common Attribute	
Name	MD5
Width of Opening (mm)	1100
Height of Opening (mm)	2400
Height above Floor (mm)	0
Category	Common Door
Material	Metal
Opening Method	
Frame Thickness (mm)	60
Frame Centerline to Wa...	0
Horizontal Gap between...	0
Vertical Gap between O...	0
Depth of Opening (mm)	(200)
Slope with Wall	Yes
Entity Object Type	Normal Object
Associated Component	
Associated PPVC	
Associated Unit Type (P...	
Summary Info	

Door



Attribute	
Attribute	Value
Common Attribute	
Name	W12
Width of Opening (mm)	1975
Height of Opening (mm)	1800
Height above Floor (mm)	1100
Category	Common Window
Material	Metal
Opening Method	
Frame Thickness (mm)	60
Frame Centerline to Wa...	0
Horizontal Gap between...	0
Vertical Gap between O...	0
Depth of Opening (mm)	(200)
Slope with Wall	Yes
Entity Object Type	Normal Object
Associated Component	
Associated PPVC	
Associated Unit Type (P...	
Summary Info	

Window

* It is recommended to convert to excel & Identify into software

5.3a Identify Door/ Window from PDF

- Step 1: Tab {Identify}, Select [Element Schedule]
- Step 2: Highlight Schedule & right click
- Step 3: Nominate the corresponding column & Identify

The screenshot shows the 'Identify' tab in the software interface. A green circle with the number '1' highlights the 'Element Schedule' button in the top toolbar. A green circle with the number '2' highlights a table titled 'Door Schedule' which is highlighted with a red dashed border. The table has three columns: Type, Width, and Height.

Type	Width	Height
GD01	2000	2400
FD01	1000	2400
TD01	2000	2100
TD02	950	2100

The screenshot shows the 'Identify Schedule' dialog box. A green circle with the number '3' highlights the 'Name' column in the table. A red dashed box highlights the 'Name' column in the table. A red dashed box highlights the 'Name' column in the table. A red dashed box highlights the 'Name' column in the table.

1	2	3	4	5
Name	Width	Height	Type	Correspon...
		Door Schedule	Door	Zone-1[2]
Type	Width	Height	Door	Zone-1[2]
GD01	2000	2400	Door	Zone-1[2]
FD01	1000	2400	Door	Zone-1[2]
TD01	2000	2100	Door	Zone-1[2]
TD02	950	2100	Door	Zone-1[2]

Operation Steps:

1. Select the worksheet;
2. Select element group;
3. Select element type;
4. Select column title;
5. Select the floor to which the element belongs (all information of the corresponding row will be set);
6. Click Identify button, and corresponding elements will be generated.

Identify Schedule

Identify Element Schedule

Identify Finish Schedule

Import Excel File

Select CAD Data Import

Clear Import

Delete Row

Delete Column

Merge Rows

Merge Columns

Copy Row

Copy Column

Batch Replace

Operate Grid

Worksheet: [Dropdown]

Element Group: Door/Winc

Element Type: Door/Winc

Name

Width

Height

Width * Height

Height * Width

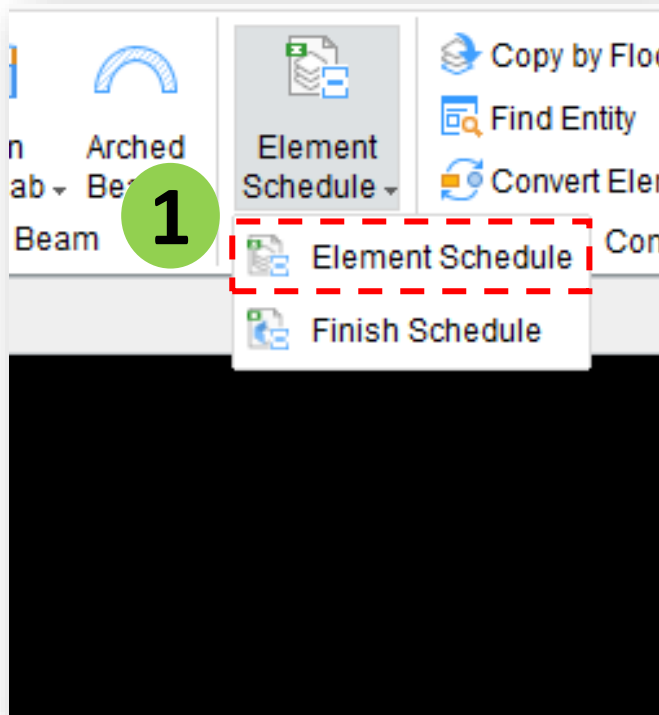
Steel Ratio

Summary Info

Remarks

5.3a Identify Door/ Window from Excel

- Step 1: Tab {Draw}, Select [Element Schedule]
- Step 2: Import Excel File
- Step 3: Nominate the corresponding column & Identify



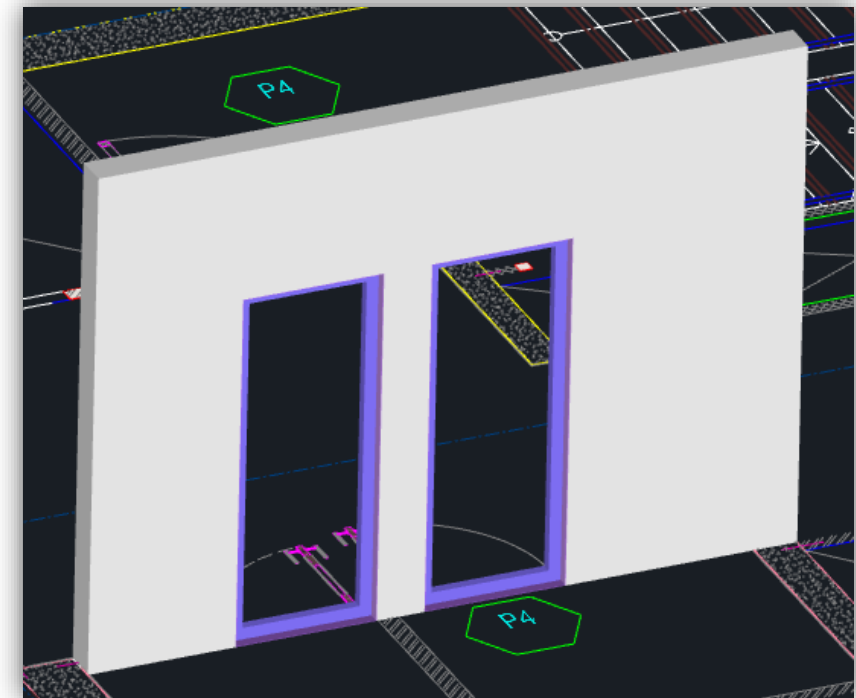
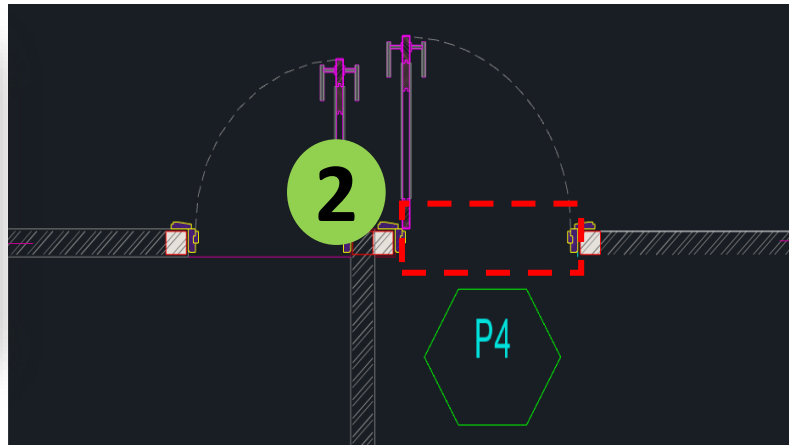
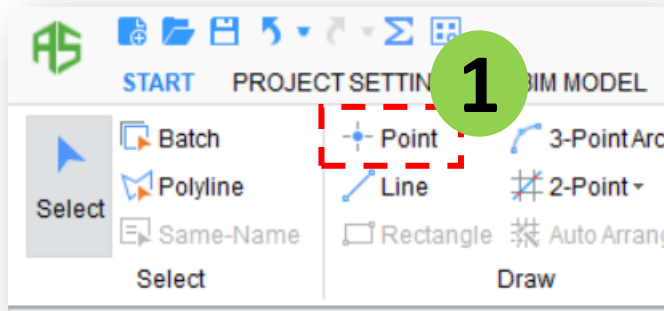
The 'Identify Schedule' dialog box is shown. The 'Identify Element Schedule' tab is active, indicated by a green circle with the number 2. The 'Import Excel File' button is highlighted with a red dashed box. Below the tabs, there are dropdown menus for 'Worksheet', 'Element Group' (set to 'Door/Winc'), and 'Element Type' (set to 'Door/Winc'). A table with 5 columns is displayed, with the first row highlighted by a green circle with the number 3. The columns are labeled 1 through 5: Name, Width, Height, Type, and Correspondence. A red dashed box highlights the 'Correspondence' column header, with a red arrow pointing to a list of options: Name, Width, Height, Width * Height, Height * Width, Steel Ratio, Summary Info, and Remarks.

1	2	3	4	5	
Name	Width	Height	Type	Correspondence	
2		Door Schedule	Door	Zone-1[2]	
3	Type	Width	Height	Door	Zone-1[2]
4	GD01	2000	2400	Door	Zone-1[2]
5	FD01	1000	2400	Door	Zone-1[2]
6	TD01	2000	2100	Door	Zone-1[2]
7	TD02	950	2100	Door	Zone-1[2]

Operation Steps:
1. Select the worksheet; 2. Select element group; 3. Select element type; 4. Select column title;
5. Select the floor to which the element belongs (all information of the corresponding row will be set);
6. Click Identify button, and corresponding elements will be generated.

5.3b Draw Door/ Window

- Step 1: Tab {Draw}, Select [Point]
- Step 2: Point the door/window according to Key plan



* Door & Window Quantity will be automatically deduct away from the Wall Quantity
Software will be able to consider the opening side formwork automatically

Quantity of Door

Notes:

Which quantity to extract for DOOR

Quantity you need	Quantity to extract from Glodon
Area (m2)	Area of Opening
Length of three edges	Length of edge and break of opening

	Quantity Name	Quantity Expression	Quantity	Unit
1	Area of opening	$0.825 \times \text{Width} \times 2.100 \times \text{Height}$	1.733	m2
2	Number		1	pc
3	Area of frame	$0.825 \times \text{Width} \times 2.100 \times \text{Height}$	1.733	m2
4	Width of opening		0.825	m
5	Height of opening		2.100	m
6	Girth of opening		5.850	m
7	Length of edge and break of opening	$0.825 \times \text{Width} + 2.100 \times \text{Height} \times 2$	5.025	m
8	Area of smallest enclosing rectangle for opening	$0.825 \times \text{Width} \times 2.100 \times \text{Height}$	1.733	m2

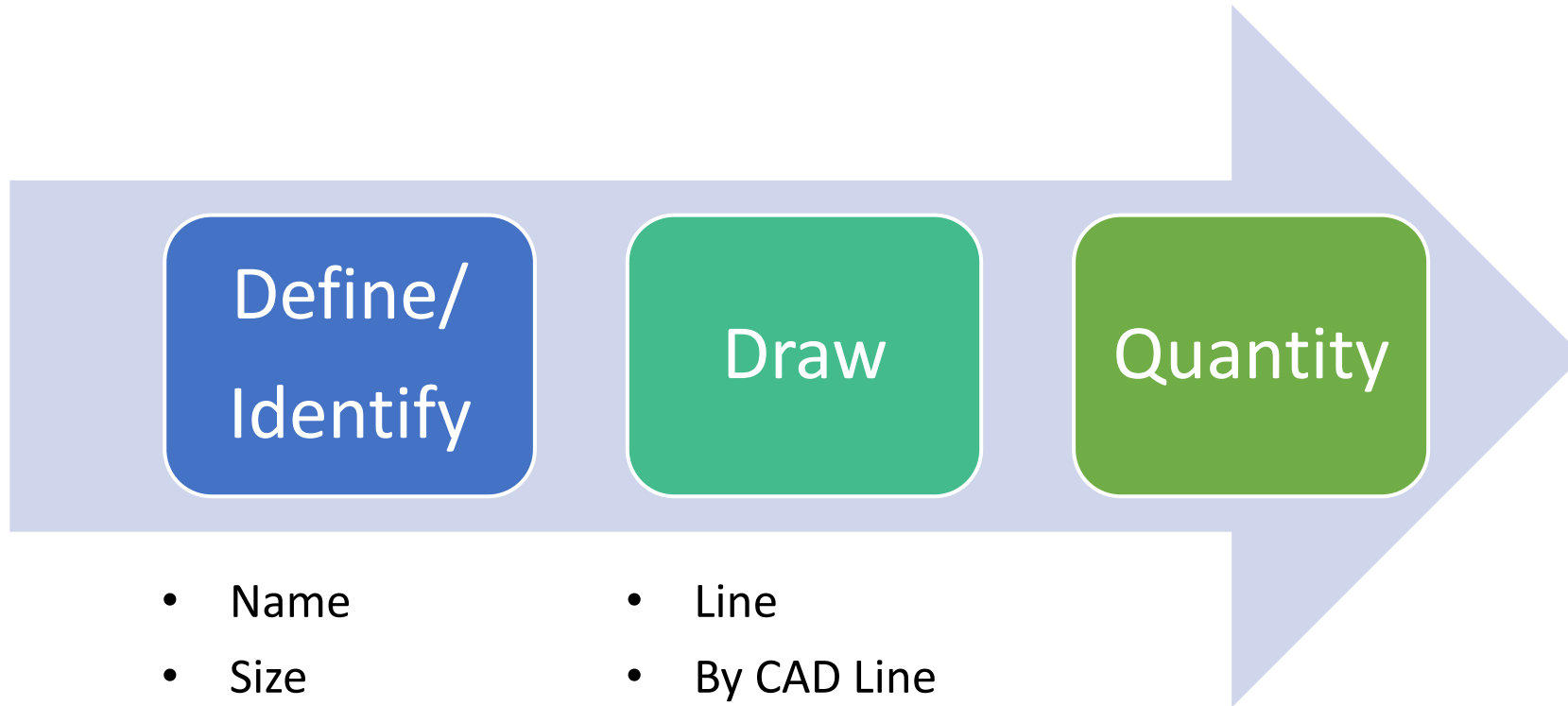
Linear Type

Beam



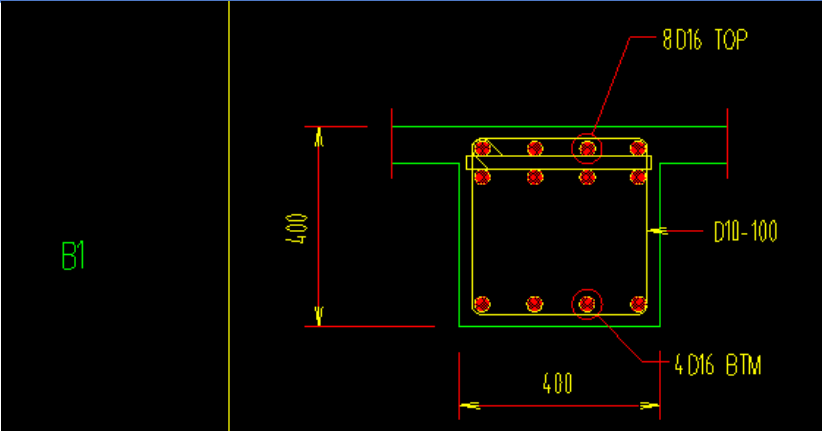
Axis
Segmentation
Column
Wall
Door/Window Opening
Beam
 Beam(B)
 Coupling Beam(J)
 Ring Beam(K)
Slab
Steel Structure ●
Staircase
Finishes
Prefabrication
Foundation
Excavation
Others
Custom Element
Custom Quantity ●

5.4 Beam



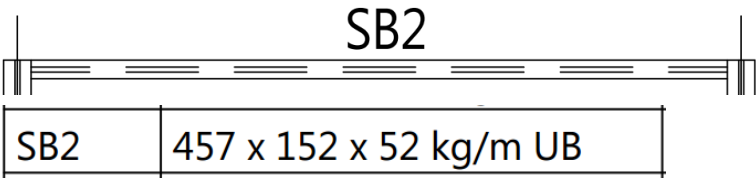
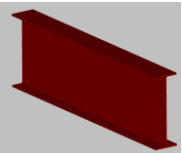
- Name
- Size
- Material
- Identify from PDF/ Excel
- Line
- By CAD Line
- Crank Beam
- * F4 to change alignment

5.4a Define Beam



Attribute	Value	Add
Common Attribute		
Name	B1	
Material	In-situ Concrete	☐
Section Width (mm)	400	☐
Section Height (mm)	400	☐
Start Top Elevation (...)	Floor_Bottom_Elevation	☐
End Top Elevation (m)	Floor_Bottom_Elevation	☐
Axis to Left Sideline...	(200)	☐
Concrete Grade	(30.00)	☐
Formwork Type	(Common Formwork)	☐
Entity Type	(Horizontal)	☐
Entity Shape	Rectangle	☐

RC Beam



Select Parametric Drawing

Drawing

UB(UK) UB(AU) TFB

UA PFC

RHS SHS

Attribute	
1 D (mm)	450
2 B (mm)	152
3 t (mm)	8
4 T (mm)	11
5 R (mm)	10
6 Theoretical Weight (kg/m)	52.30

Standard Code Custom Code

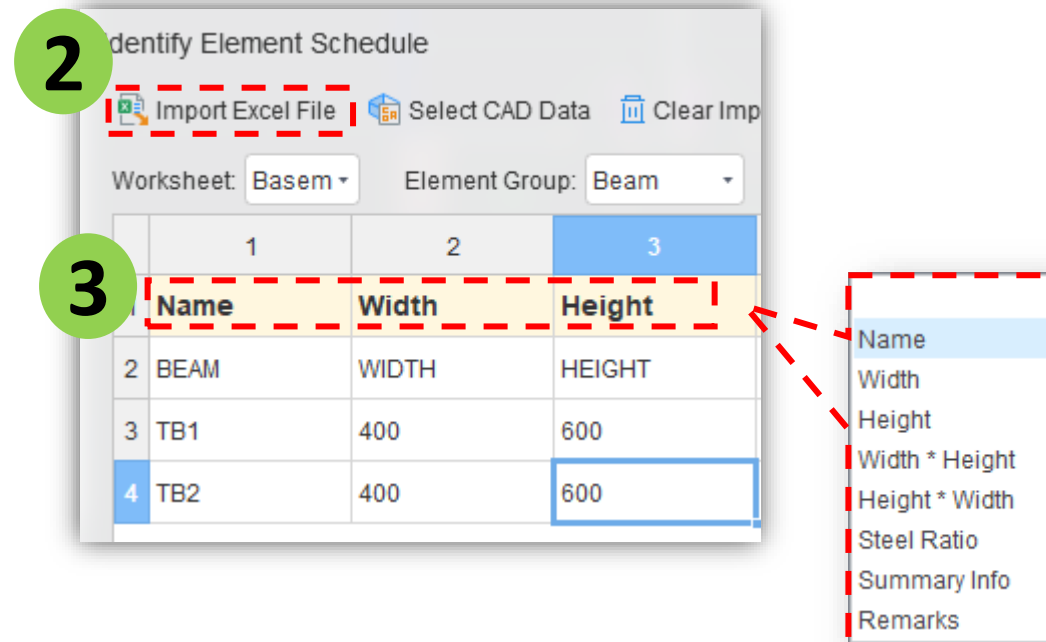
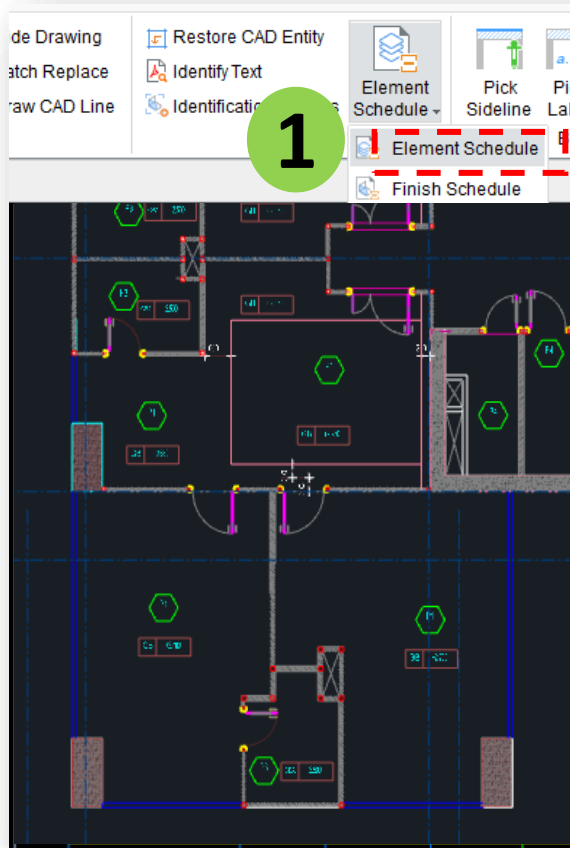
UB 450*200*65.1
UB 450*200*66.2
UB 450*200*74.9
UB 450*200*76
UB 450*200*88.9
UB 450*200*98.9
UB 450*200*110
UB 450*300*106
UB 450*300*121
UB 450*300*124
UB 450*300*145
UB 457*152*52
UB 457*152*60



Steel Beam

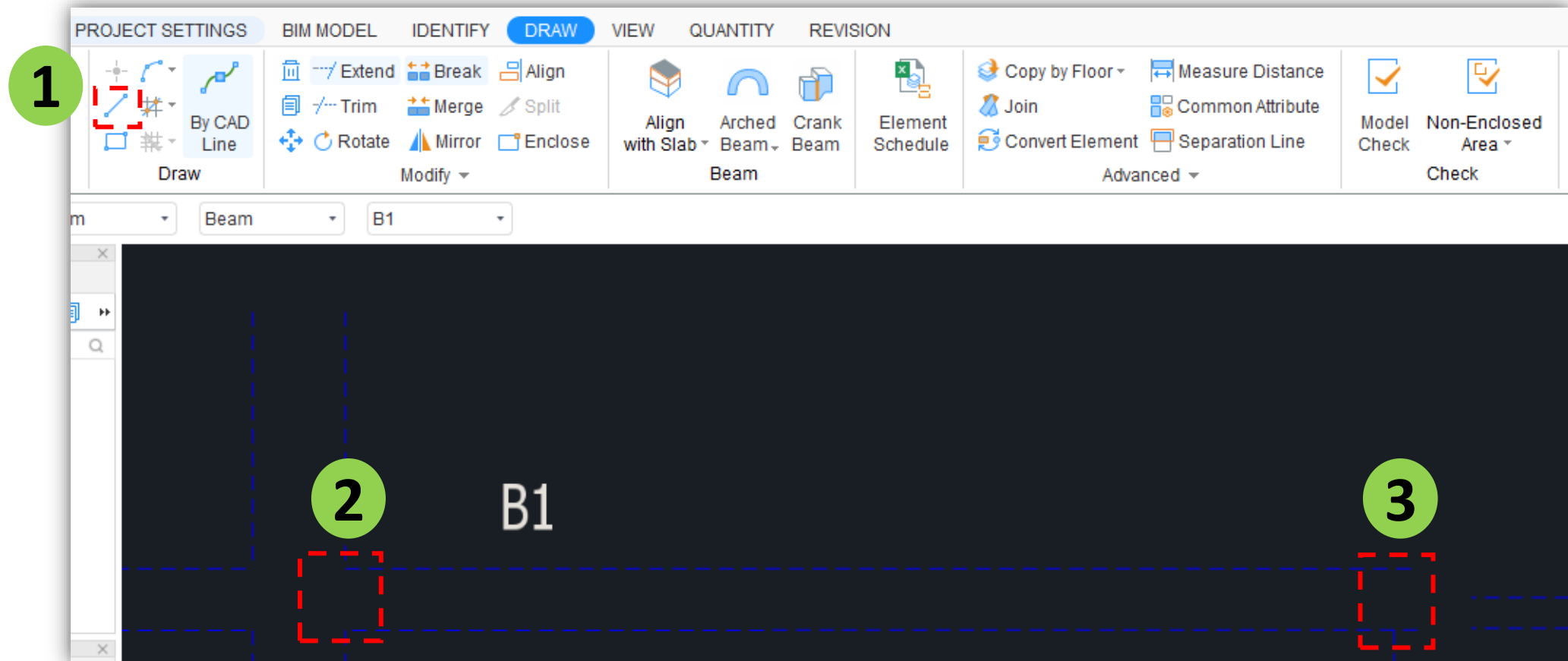
5.4a Identify Beam Schedule from Excel

- Step 1: Tab {Identify}, Select [Element Schedule]
- Step 2: Import Excel File
- Step 3: Nominate the corresponding column & Identify



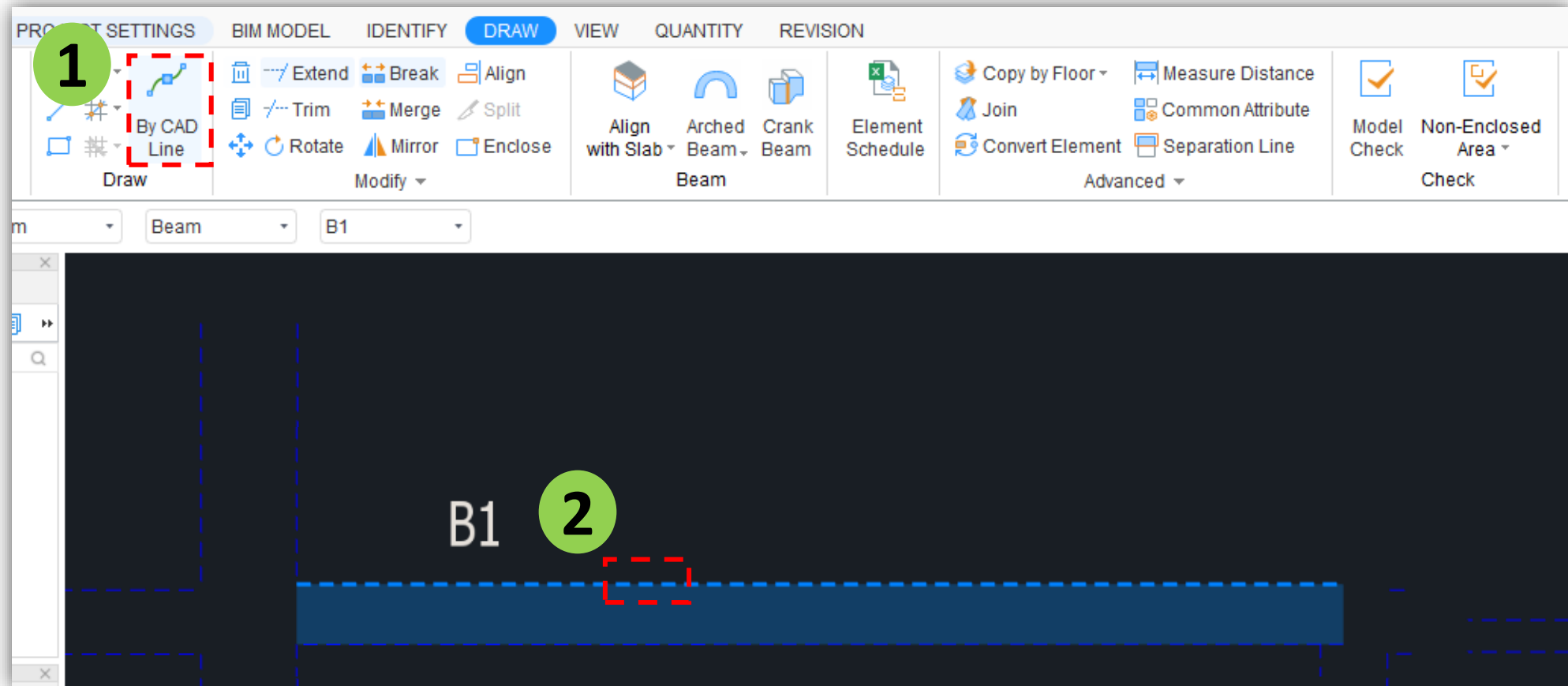
5.4b Draw Beam - Line

- Step 1: Tab {Draw}, Click [Line] to draw a straight line
- Step 2: Begin from Start Point
- Step 3: Stop at End Point



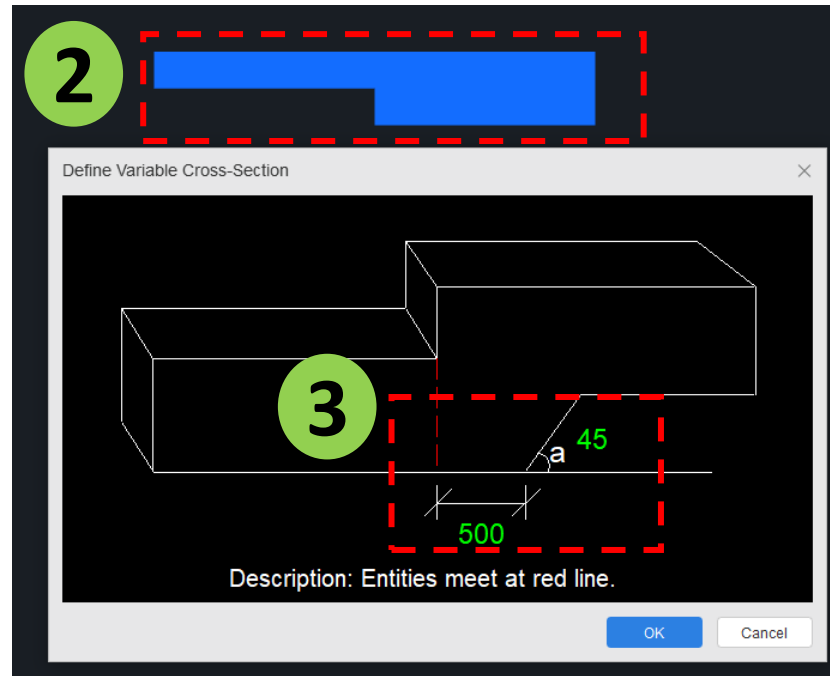
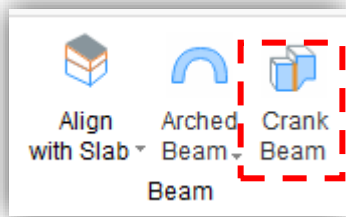
5.4b Draw Beam - By CAD Line

- **Step 1:** Tab {Draw}, Click [\[By CAD Line\]](#) to draw a straight line
- **Step 2:** Select CAD line, press F4 to adjust location, right click to generate entities

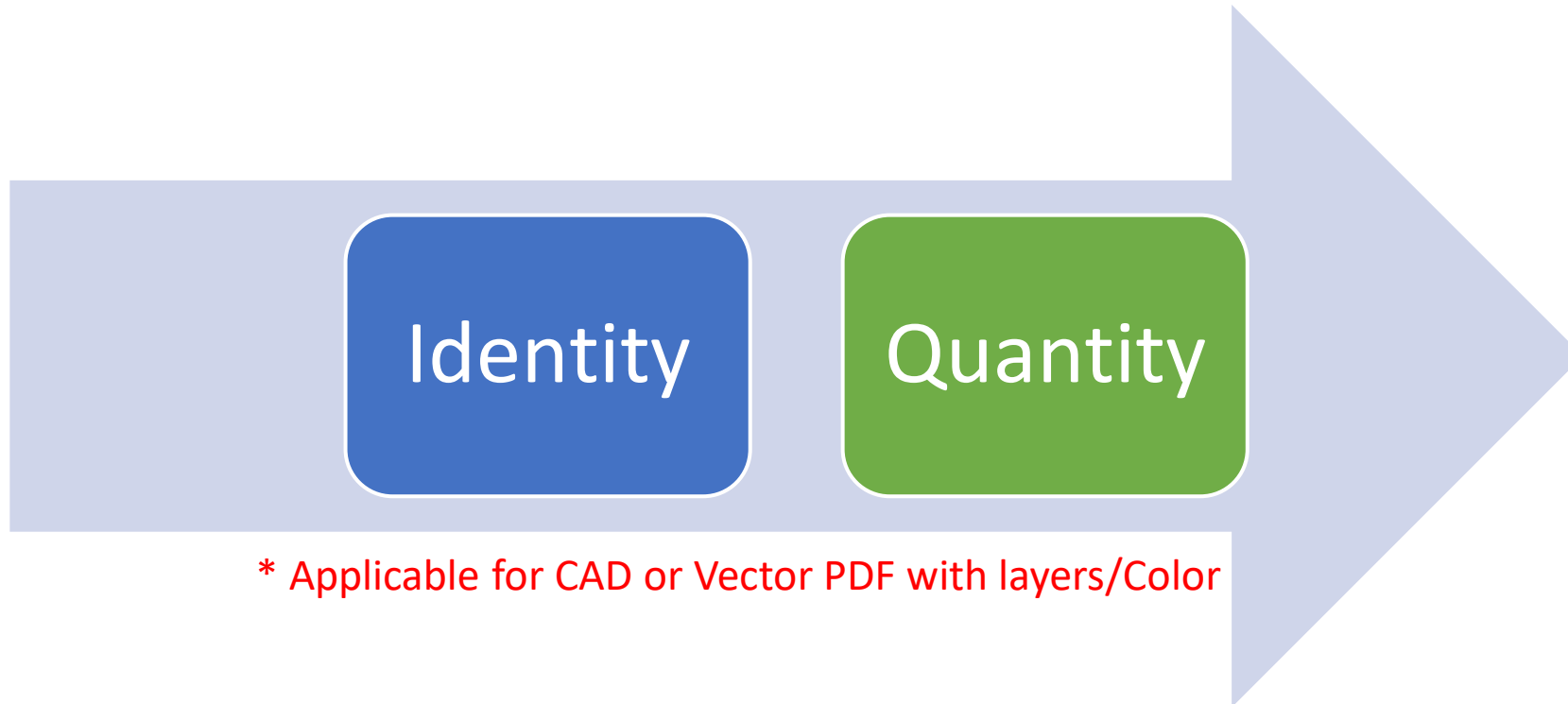


5.4b Draw Beam – Crank Beam

- Step 1: Tab {Draw}, Click [Crank Beam] to define
- Step 2: Select 2 beams, right click
- Step 3: Input Cross-Section information & ok



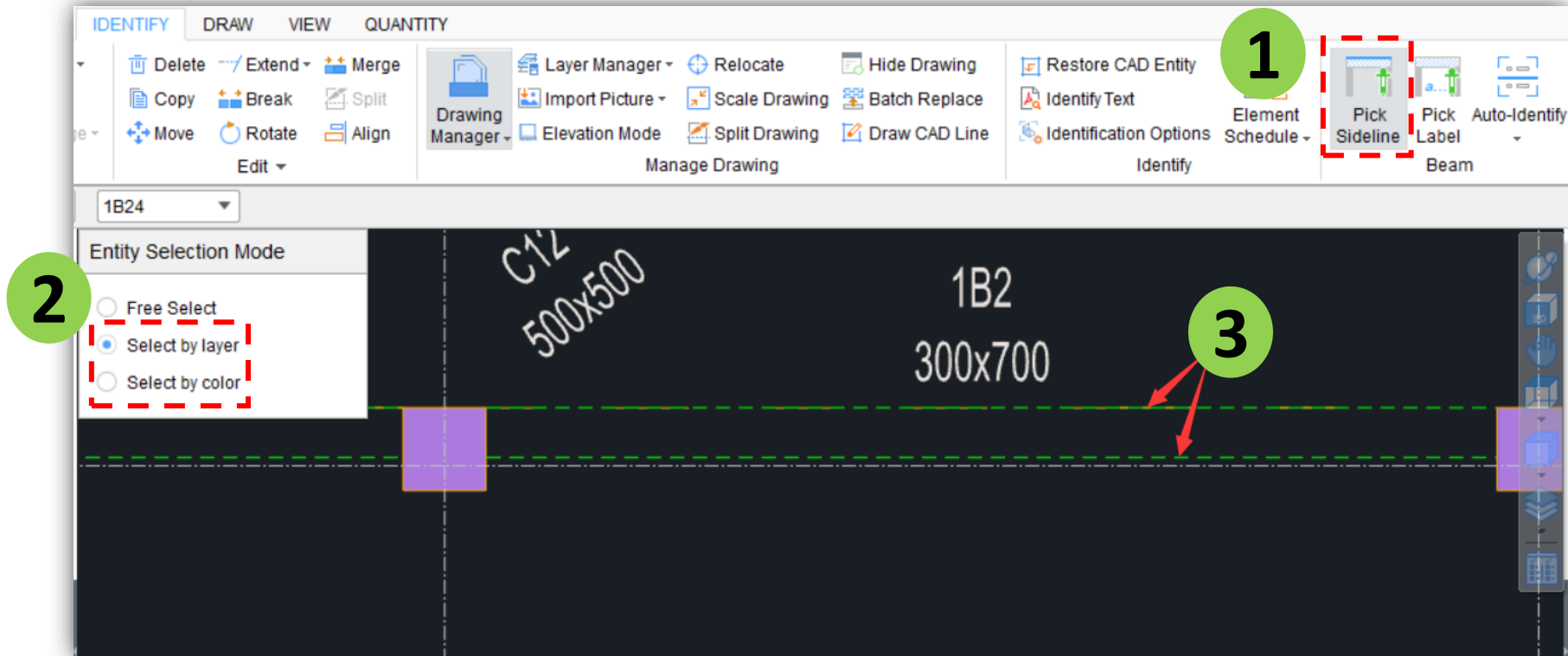
5.4(ii) Beam (Option 2)



* Applicable for CAD or Vector PDF with layers/Color

5.4(ii) Identify Beam – Pick Sideline

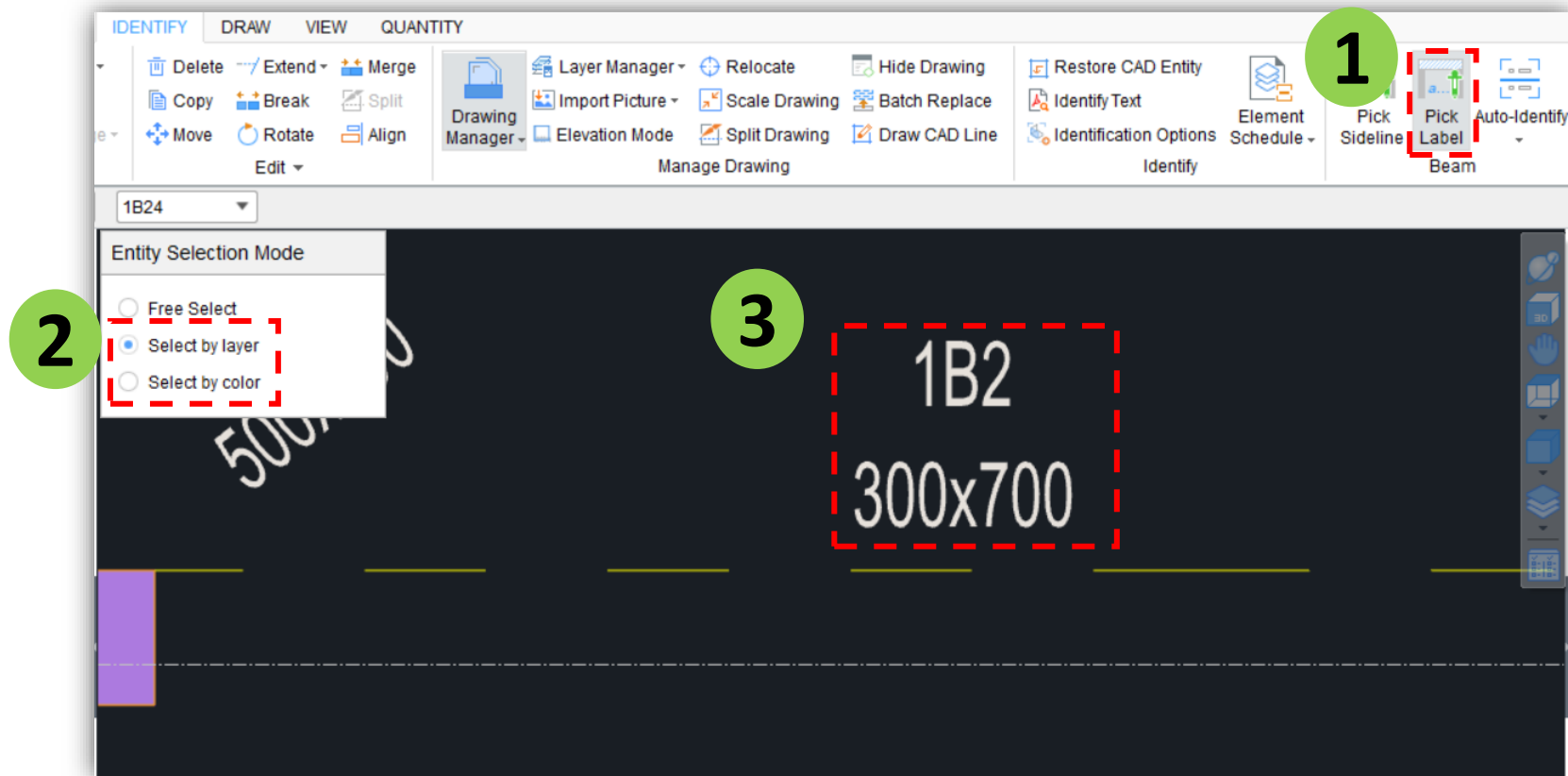
- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the frame/ side line of beam & right click



Continue →

5.4(ii) Identify Beam – Pick Label

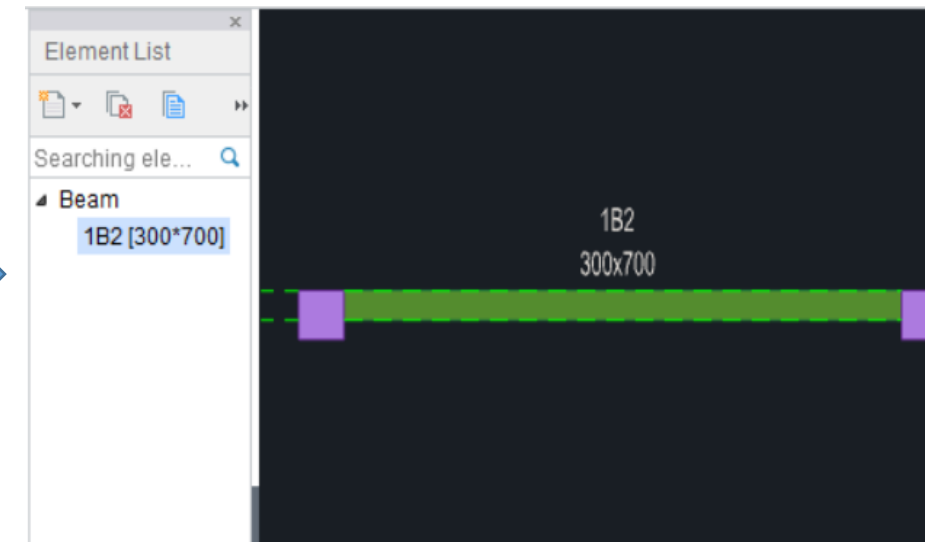
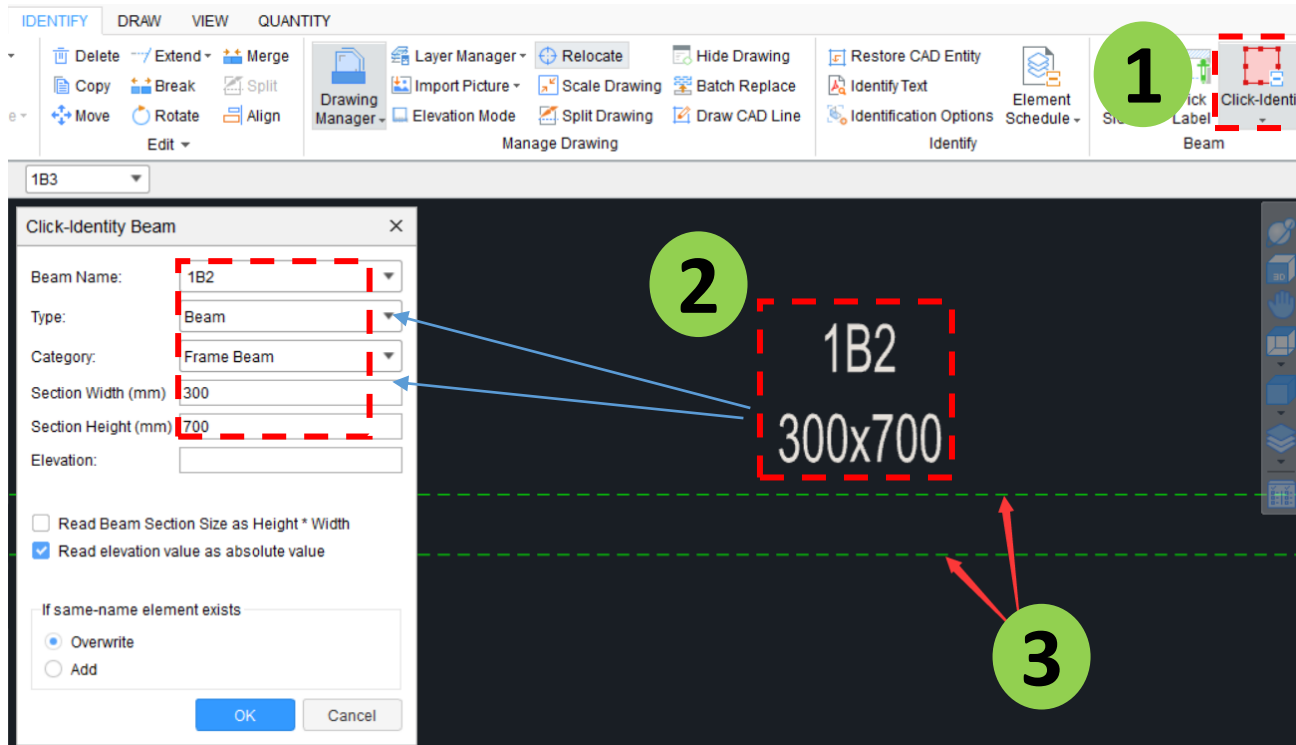
- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the name of beam & right click



Continue →

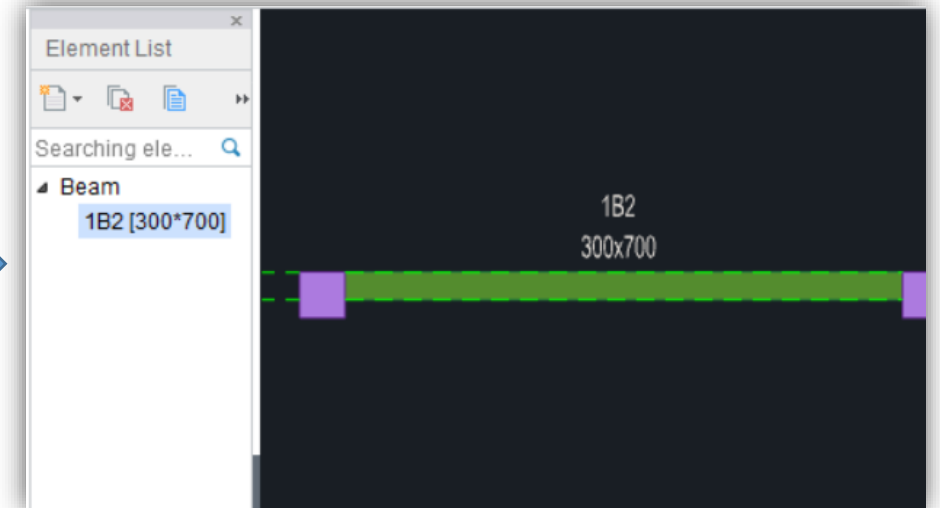
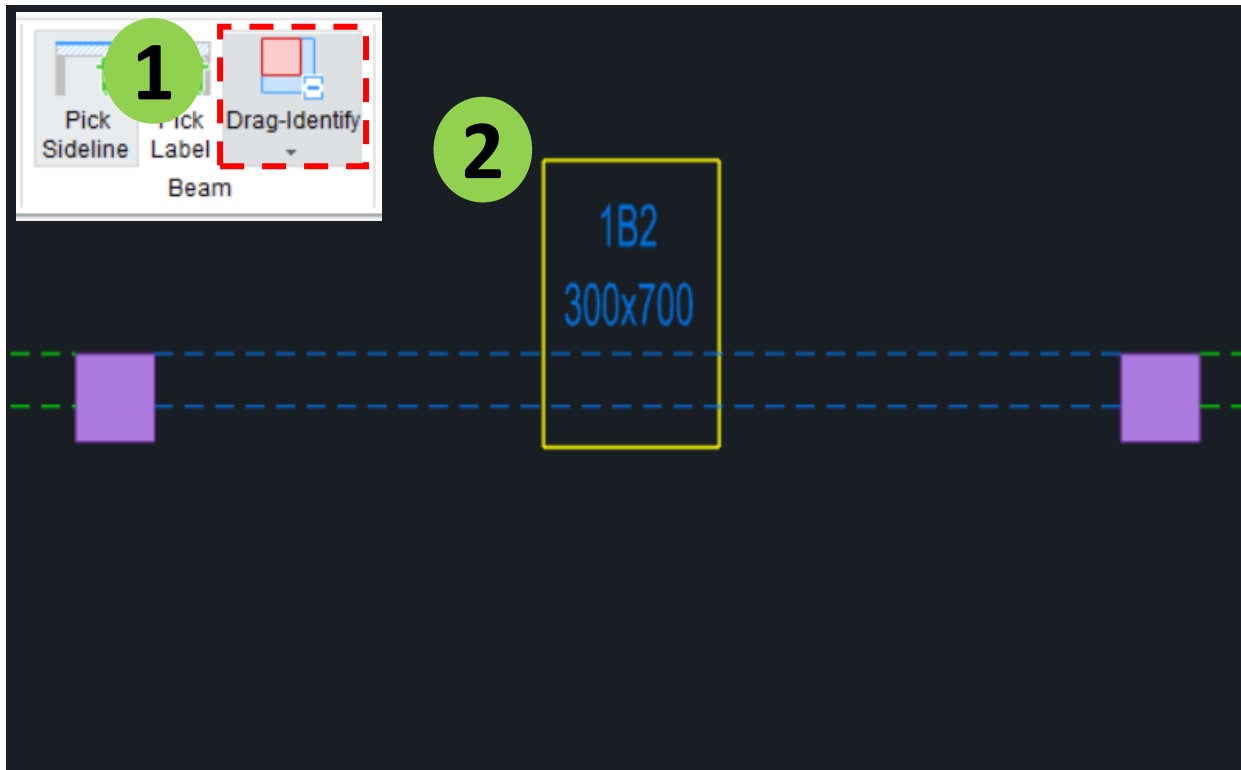
5.4(ii) Identify Beam – By [Click-Identify] Selected area

- **Step 1:** Tab {Identify}, Select **[Click-Identify]**
- **Step 2:** Select the beam name, right click
- **Step 3:** Select the beam sideline, right click



5.4(ii) Identify Beam – By [Drag-Identify] Selected area

- Step 1: Tab {Identify}, Select [Drag-Identify]
- Step 2: Drag and Select both the beam sideline & name, right click



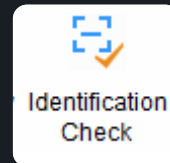
5.4b Identification Check

Identification Check

98 entity(ies) with error

- The default height is used (9)
- The entity attribute value is different from sideline size (5)
 - TBH.27 ID:20
 - TBV.1a ID:250
 - TBV.1 ID:252
 - TBV.1 ID:262
 - TBV.1a ID:264
- No name is found (4)
 - Unnamed Beam (125*600) ID:115
 - Unnamed Beam (125*600) ID:207
 - Unnamed Beam (125*600) ID:208
 - Unnamed Beam (125*450) ID:217
- The default height is used;No name is found (78)
- The entity attribute value is different from sideline size;No name is found (2)
 - Unnamed Beam (125*600) ID:214
 - Unnamed Beam (125*600) ID:215

1
Check



2
Modify

Update

Name: 26

Section Width: 150

Section Height: 500

Checked ☐

5.4c Quantity of Beam

Notes:

Which quantity to extract for SUSPENDED BEAM

Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume
Formwork (m2)	Area of Formwork

	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	$(0.250 \times \text{Width} \times 0.800 \times \text{Height} \times 10.631 \times \text{Length of Centerline}) - 0.165 \times \text{Deduct beam} - 0.393 \times \text{Deduct in-situ slab}$	1.568	m3
2	Area of Formwork(<=3.5m)	AF2(<=3.5m)	$8.504 \times \text{Original Area of Formwork to Left Side} + 8.504 \times \text{Original Area of Formwork to Right Side} + 2.658 \times \text{Original Area of Formwork to Soffit of Beam} + 0.200 \times \text{Area of Formwork to End} - 1.528 \times \text{Deduct beam} - 3.187 \times \text{Deduct in-situ slab}$	15.152	m2
3	Area of Formwork to Side of Beam	AFSB	$17.009 \times \text{Original Area of Formwork to Side} - 2.123 \times \text{Deduct beam} - 3.012 \times \text{Deduct in-situ slab}$	11.874	m2

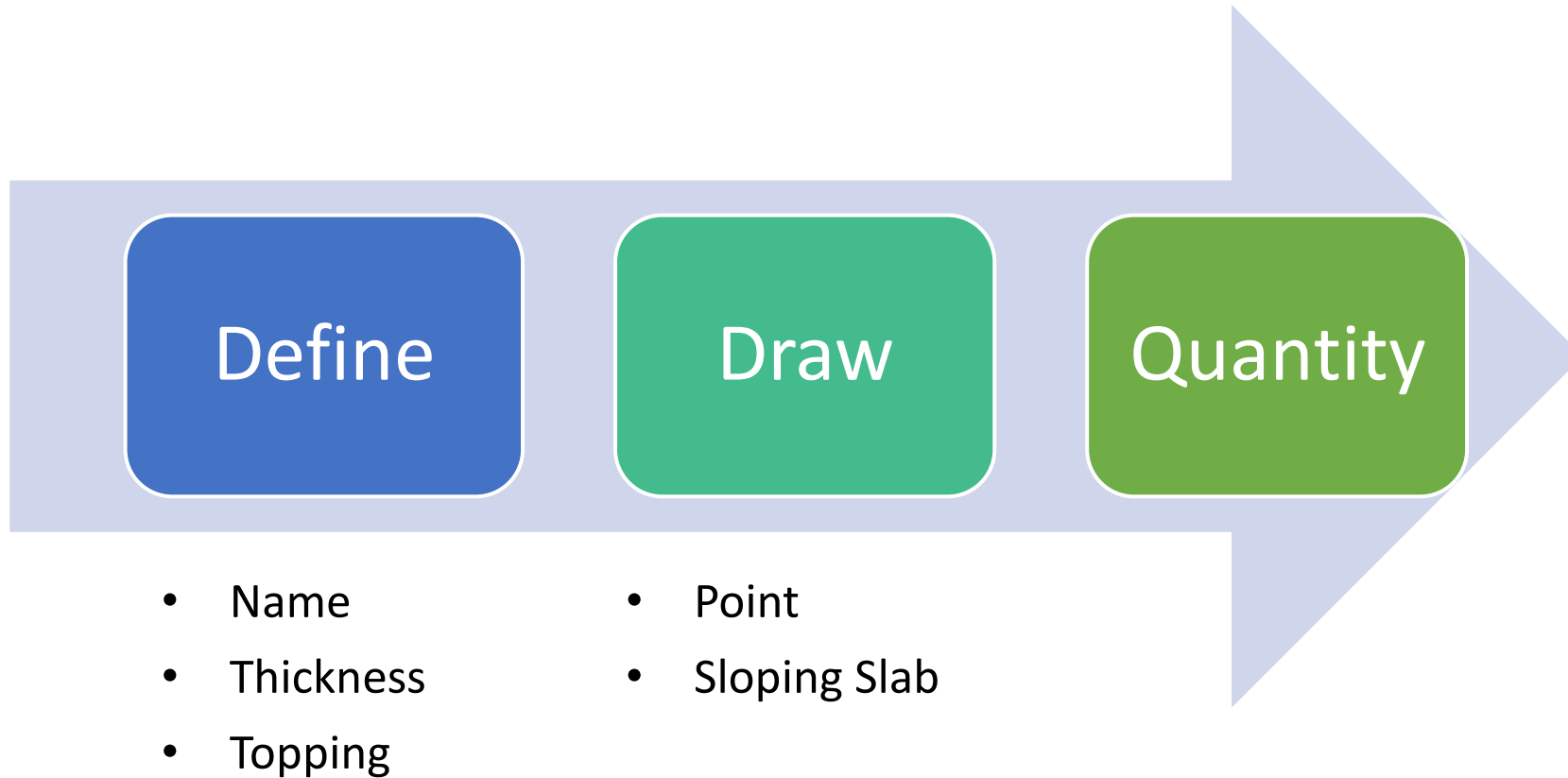
Area Type



Slab

Axis	
Segmentation	
Column	
Wall	
Door/Window Opening	
Beam	
Slab	
 In-situ Slab(S)	
 Precast Slab(S)	
 Spiral Slab(S)	
 Ramp(R)	
 Drop Panel(V)	
 Slab Opening(N)	
Steel Structure	●
Staircase	
Finishes	
Prefabrication	
Foundation	
Excavation	
Others	
Custom Element	
Custom Quantity	●

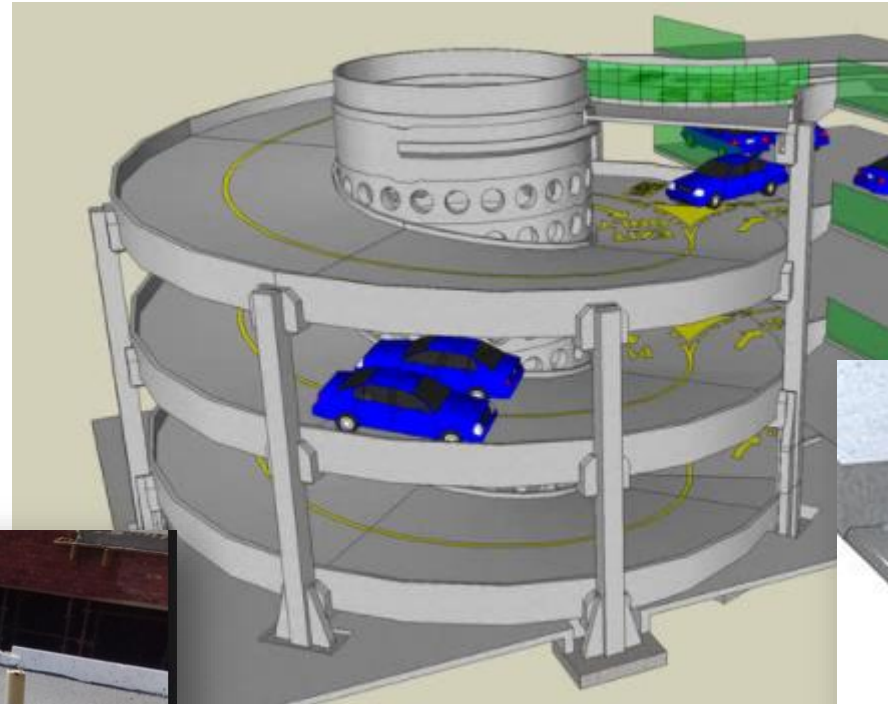
5.5 In-situ Slab/ Sprial Ramp / Steel Slab



5.5 In-situ Slab/ Ramp/ Steel Slab

- Type of Slab

In-Situ Slab

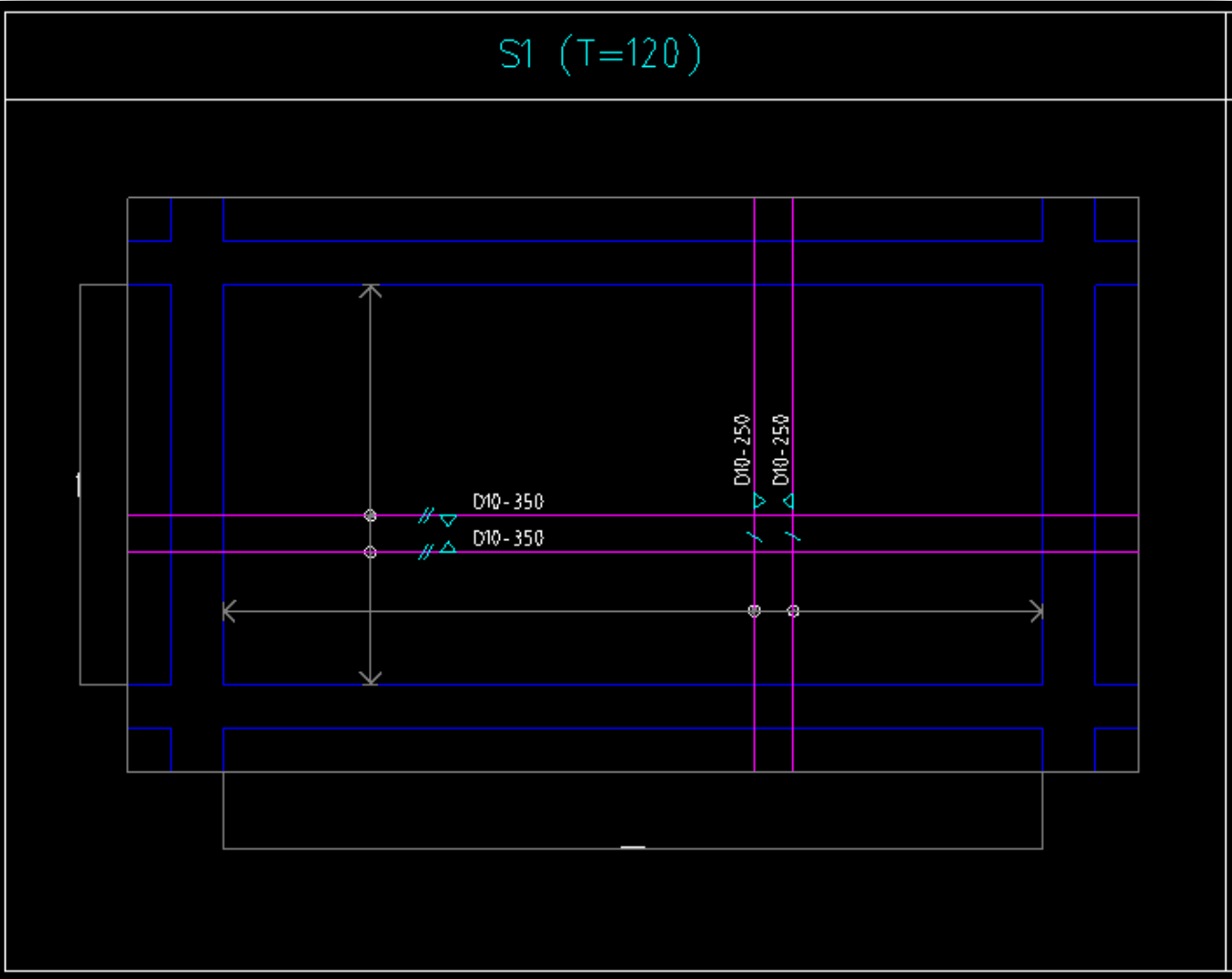


spiral ramp

Bondek Slab



5.5a Define Slab



Attribute	Value	Add
Common Attribute		
Name	S1	☐
Category	Suspended Slab	☐
Thickness (mm)	(120)	☐
Top Elevation (m)	Floor_Bottom_Elevation	☐
Material	In-situ Concrete	☐
Concrete Grade	(25.00)	☐
Formwork Type	(Common Formwork)	☐
Entity Type	(Horizontal)	☐

5.5a Define Steel Slab

BONDEK SLAB TO BE 150mm THK

Element List

New Composite Slab

New Steel Deck

Select Parametric Drawing

Drawing

ComFlor 46

ComFlor 51

ComFlor 60

Attribute

value

1

D (mm)

51

2

B (mm)

137

3

B1 (mm)

40

4

B2 (mm)

13

5

t (mm)

1

Big Image Preview

B1/2

B2/2

B

ComFlor 51

OK

Cancel

Attribute Editor

Attribute

Value

Common Attribute

Name

Bondek Slab

Category

Composite Slab

Overall Slab Thickness ...

150

Section Shape

ComFlor 51

Nominal Thickness (mm)

1

Mesh Specification

Top Elevation (m)

Floor_Bottom_Elevation

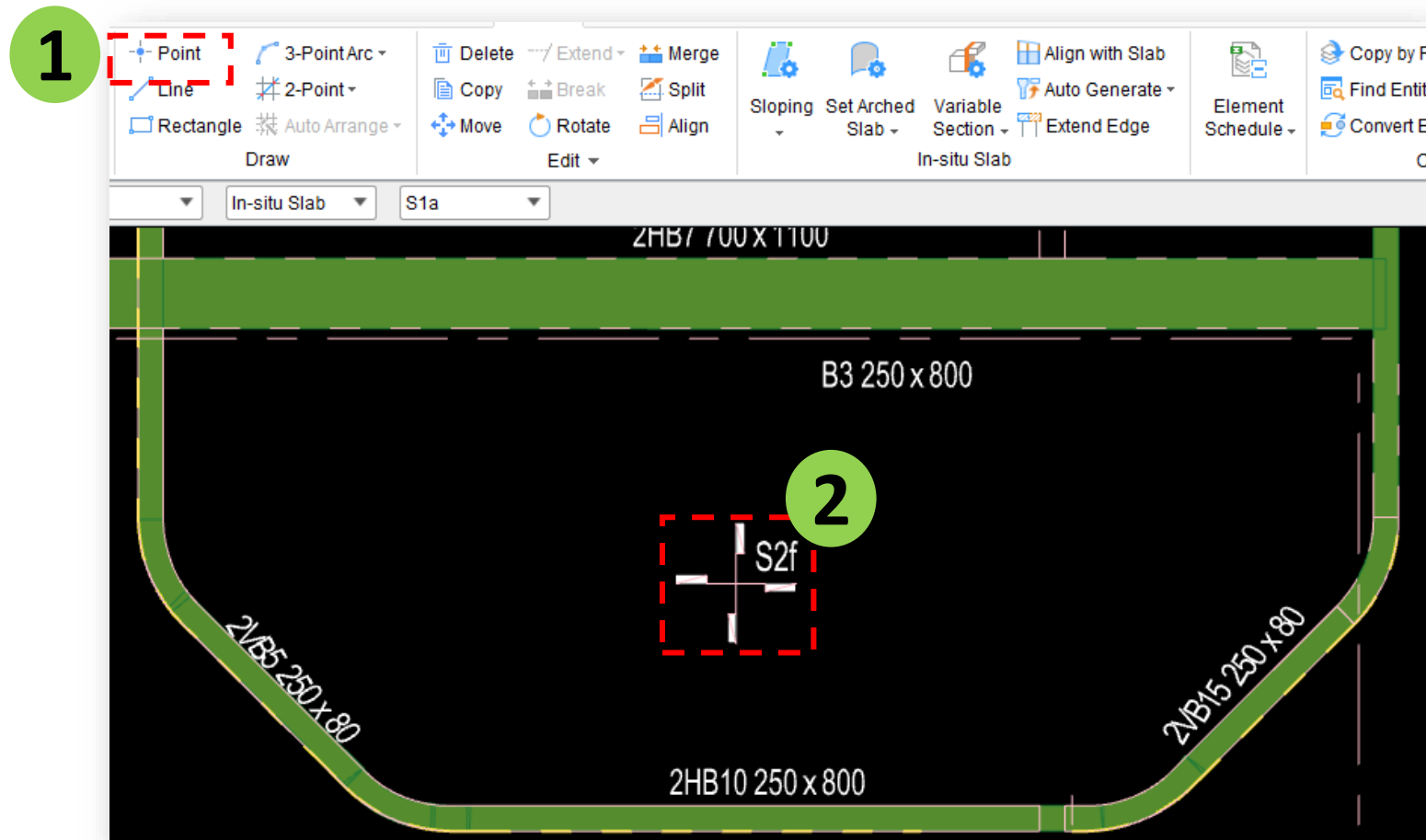
Number of Shear Studs

1

Bondek Slab

5.5b Draw Slab

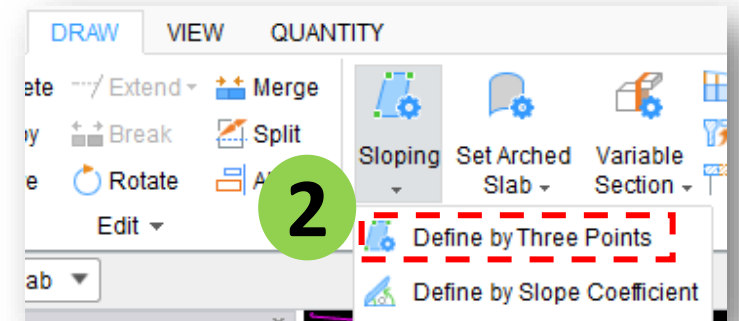
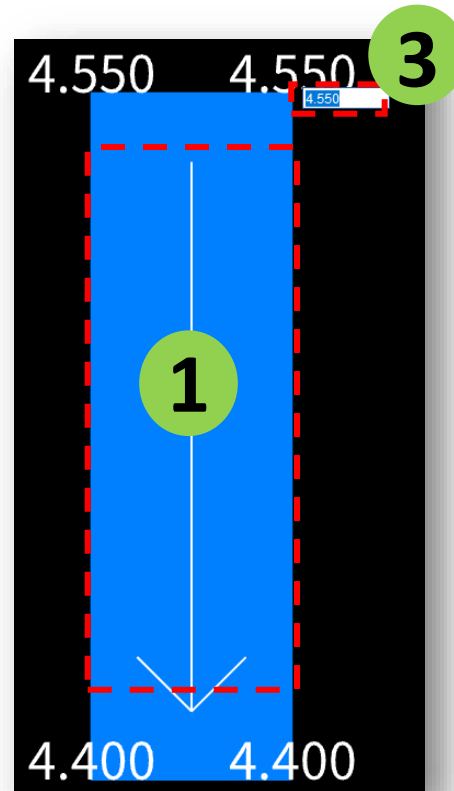
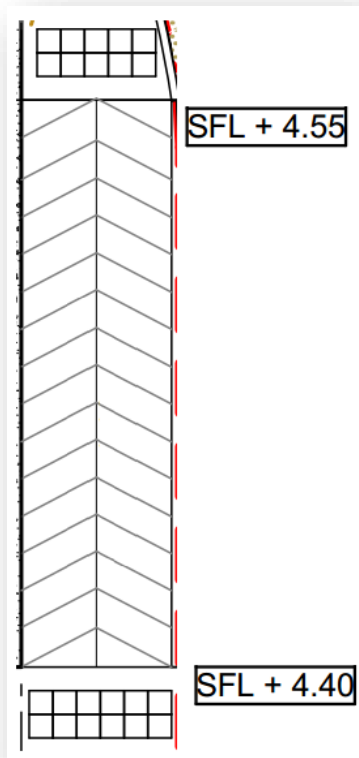
- Step 1: Tab {Draw}, Click [Point]
- Step 2: Point to an enclosed area by wall/beam



5.5b Draw Slab (cont'd)

To do sloping slab with elevation given

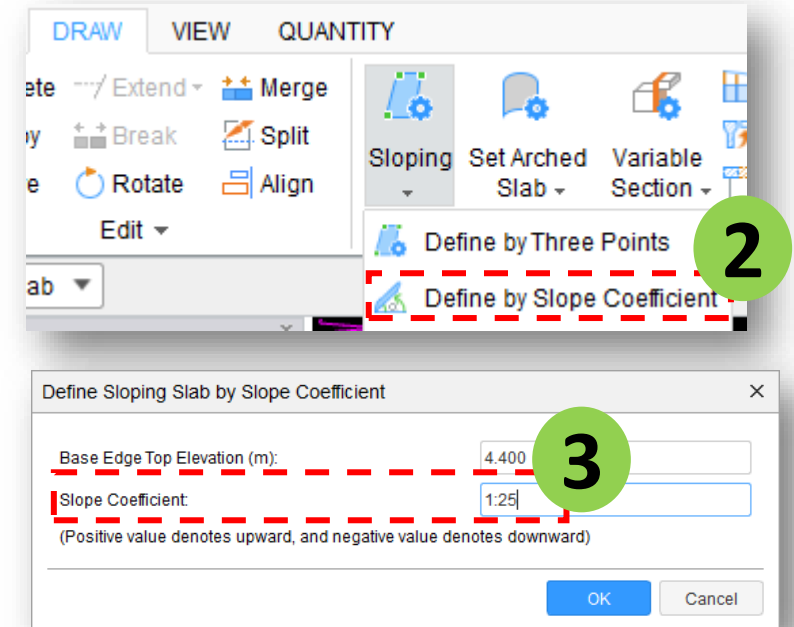
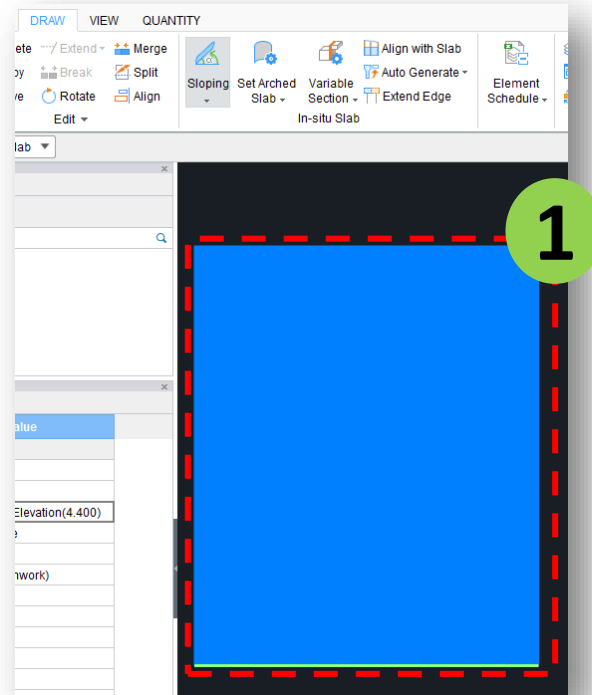
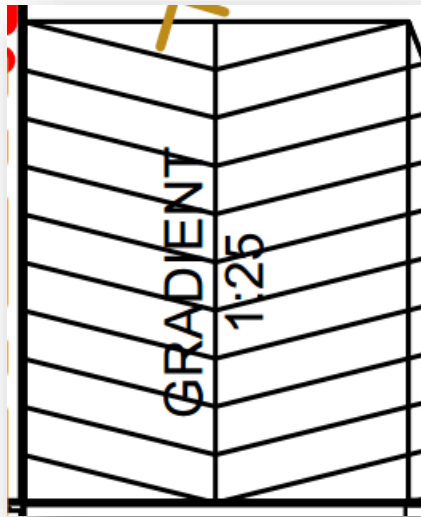
- Step 1: Tab {Draw}, Select **slab**
- Step 2: Select [Define by Three Points]
- Step 3: Input the **elevation** of slab In the boxes



5.5b Draw Slab (cont'd)

To do sloping slab with gradient given

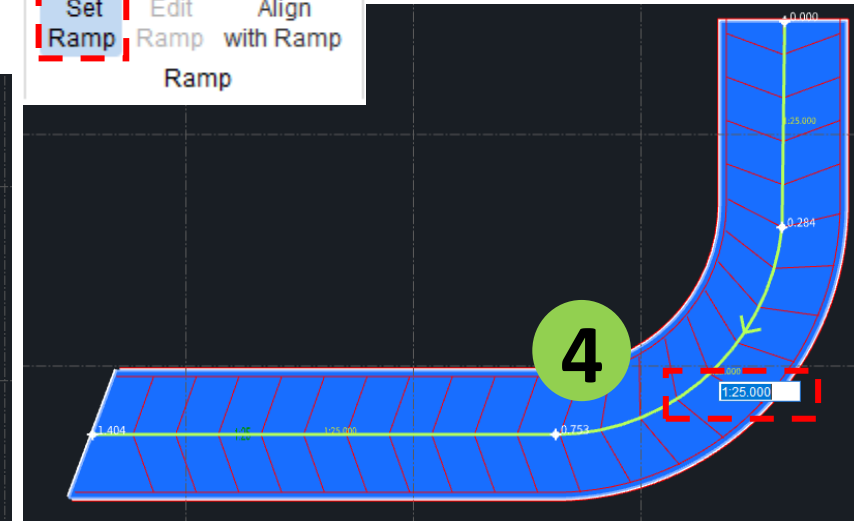
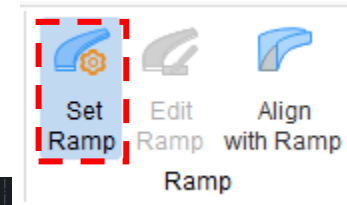
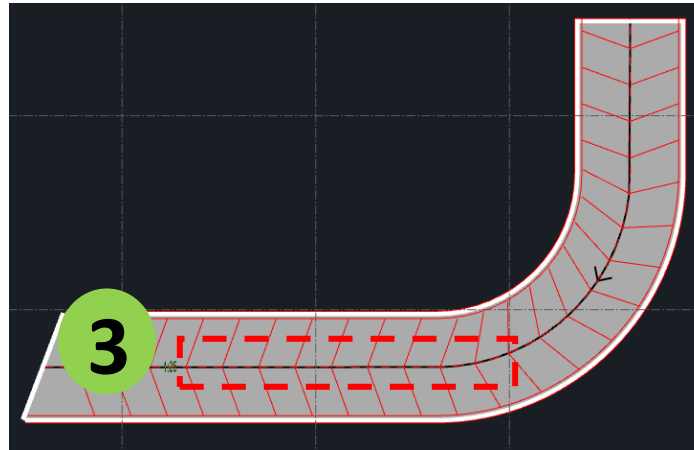
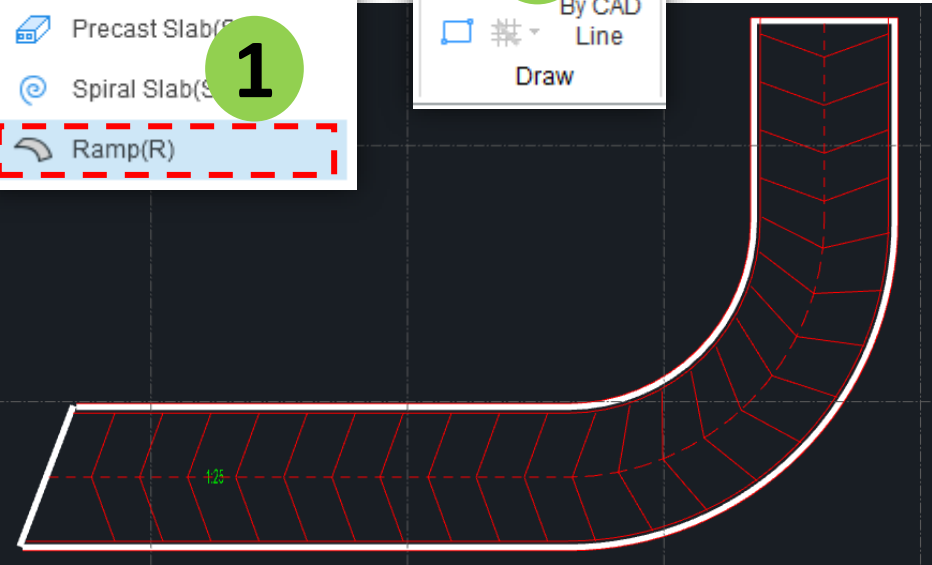
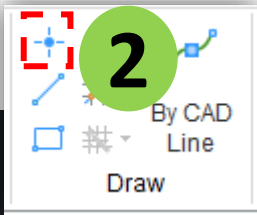
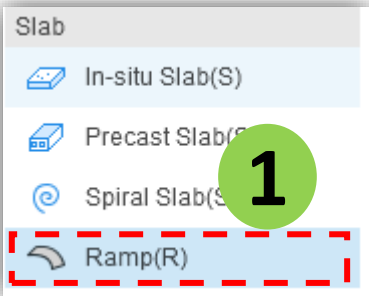
- Step 1: Tab {Draw}, Select **slab**
- Step 2: Select [Define by Slope Coefficient]
- Step 3: Input the **gradient** of slab



5.5b Draw Spiral Ramp

To do spiral ramp with gradient given

- Step 1: Tab {Draw}, Select **RAMP**
- Step 2: **Point** to an enclosed area by wall/beam
- Step 3: Draw centreline of the ramp
- Step 4: Input gradient of the Ramp



5.5c Quantity of Slab

Notes:

Which quantity to extract for SUSPENDED SLAB

Quantity you need	Quantity to extract from Glodon
Concrete (m3)	Volume
Formwork (m2)	Area of Formwork
Side Formwork (m)	Length of Formwork to Edge and Break of Slab in Stage

	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	$((3.33093 \langle \text{Angle} \rangle / 2 - \sin(3.33093 \langle \text{Angle} \rangle / 2) * \cos(3.33093 \langle \text{Angle} \rangle / 2)) * 1.508 \langle \text{Radius} \rangle * 1.508 \langle \text{Radius} \rangle$	0.800	m3
2	Area	A	$(3.33093 \langle \text{Angle} \rangle / 2 - \sin(3.33093 \langle \text{Angle} \rangle / 2) * \cos(3.33093 \langle \text{Angle} \rangle / 2)) * 1.508 \langle \text{Radius} \rangle * 1.508 \langle \text{Radius} \rangle$	3.999	m2
3	Area of Formwork to Soffit(<=3.5m)	AFS2 (<=3.5m)	$((3.33093 \langle \text{Angle} \rangle / 2 - \sin(3.33093 \langle \text{Angle} \rangle / 2) * \cos(3.33093 \langle \text{Angle} \rangle / 2)) * 1.508 \langle \text{Radius} \rangle * 1.508 \langle \text{Radius} \rangle) - 0.088 \langle \text{Deduct concrete wall} \rangle$	3.911	m2
4	Length of Formwork to Edge and Break of Slab in Stages(0.1~0.2m)	LFEB SS(0.1~...		6.202	m

Composite Type

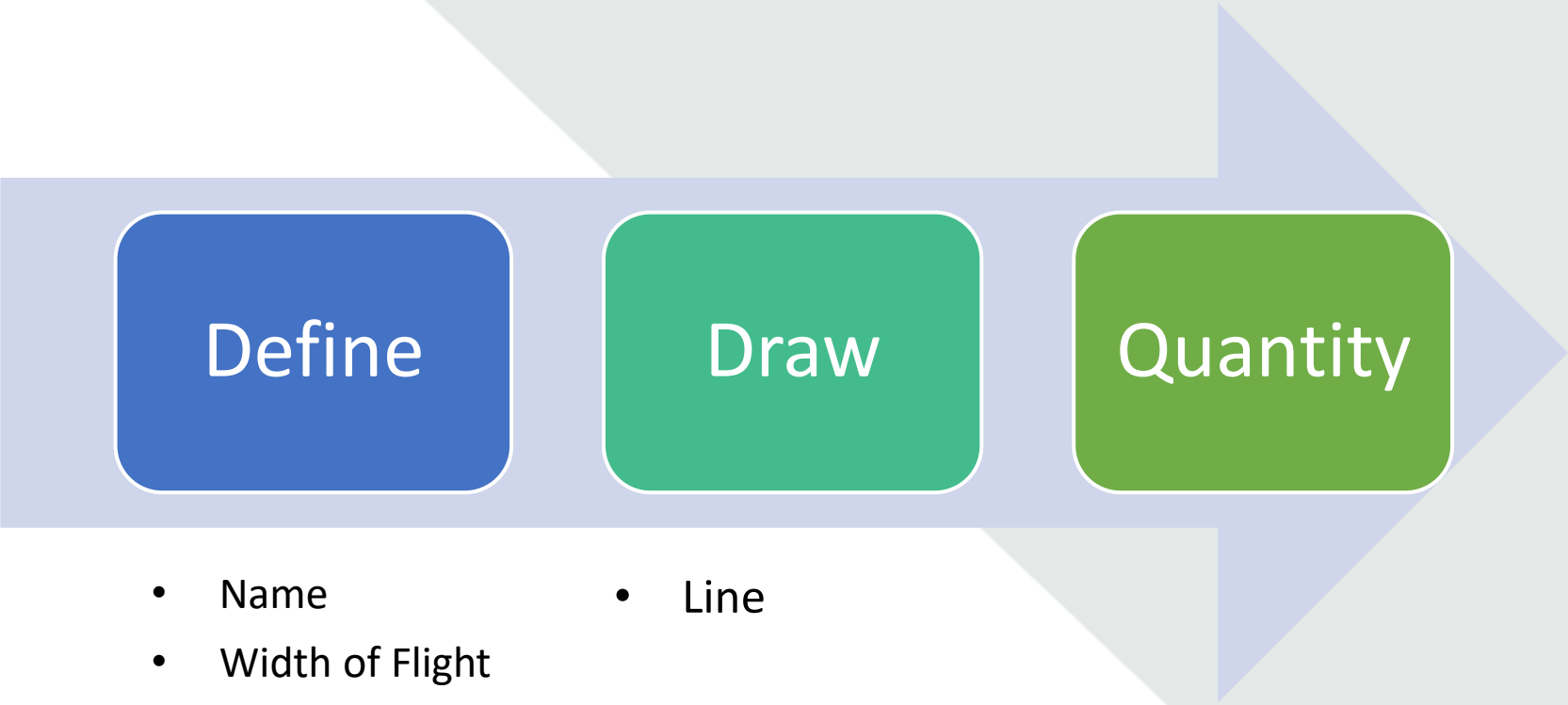


Staircase

Axis	
Segmentation	
Column	
Wall	
Door/Window Opening	
Beam	
Slab	
Steel Structure	●
Staircase	
 Staircase(F)	
 Straight Flight(F)	
 Spiral Flight(F)	
 Stairwell(F)	
Finishes	
Prefabrication	
Foundation	
Excavation	
Others	
Custom Element	
Custom Quantity	●



5.5 Staircase



Define

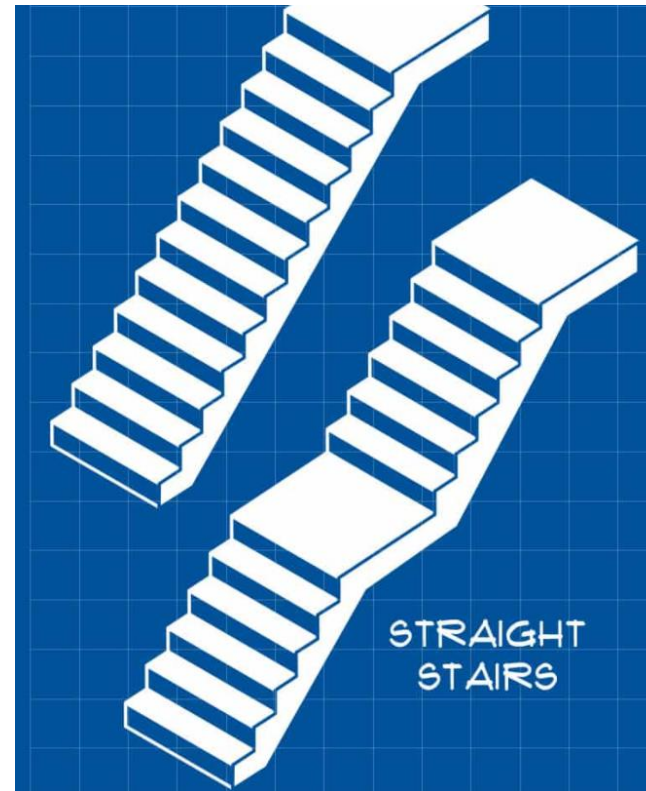
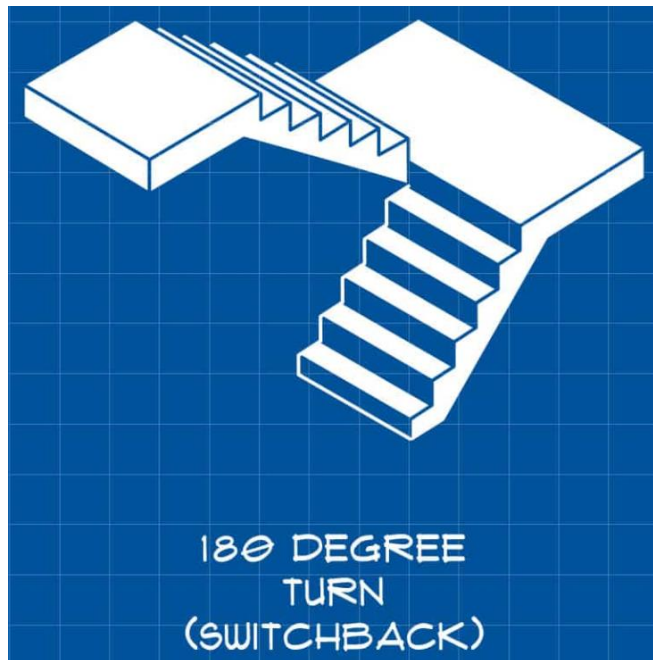
Draw

Quantity

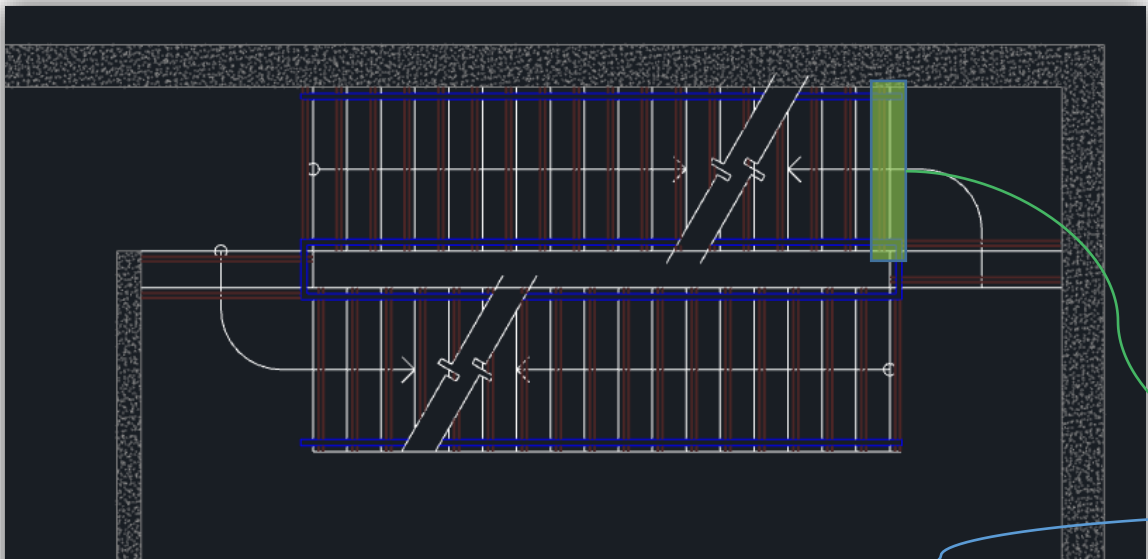
- Name
 - Width of Flight
 - Depth of Tread
 - Height of Riser
 - Width of Landing
- Line

5.5a Type of Staircase

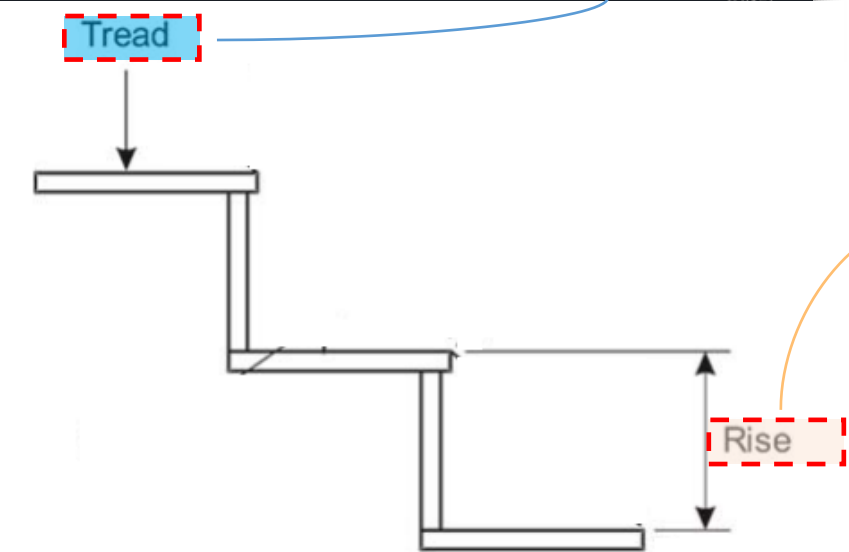
- Type of Staircase



5.5a Define Staircase



Name	Staircase-1
Material	In-situ Concrete
Staircase Layout Se...	Layout Settings 
Width of Flight (mm)	1350
Depth of Tread (mm)	280
Height of Riser (mm)	150
Number of Treads	Auto
Height of Staircase ...	Auto
Thickness of Waist ...	100
Width of Landing (m...	1200



5.5a Define Staircase

Name	Staircase-1
Material	In-situ Concrete
Staircase Layout Settings	Layout Settings
Width of Flight (mm)	1350
Depth of Tread (mm)	280
Height of Riser (mm)	150
Number of Treads	Auto
Height of Staircase ...	Auto
Thickness of Waist ...	100
Width of Landing (m...	1200

Staircase Layout

BeamRailing

Landing Beam 1

Section Height (mm): 300

Section Width (mm): 300

Landing Beam 2

Section Height (mm): 300

Section Width (mm): 300

Staircase Layout

BeamRailing

Left Side of Flight

Railing

Height (mm): 1100

Wall Mounted Handrail

Distance to Edge (mm): 75

Right Side of Flight

Railing

Height (mm): 1100

Wall Mounted Handrail

Distance to Edge (mm): 75

Left Side of Landing

Railing

Height (mm): 1100

Wall Mounted Handrail

Distance to Edge (mm): 75

Right Side of Landing

Railing

Height (mm): 1100

Wall Mounted Handrail

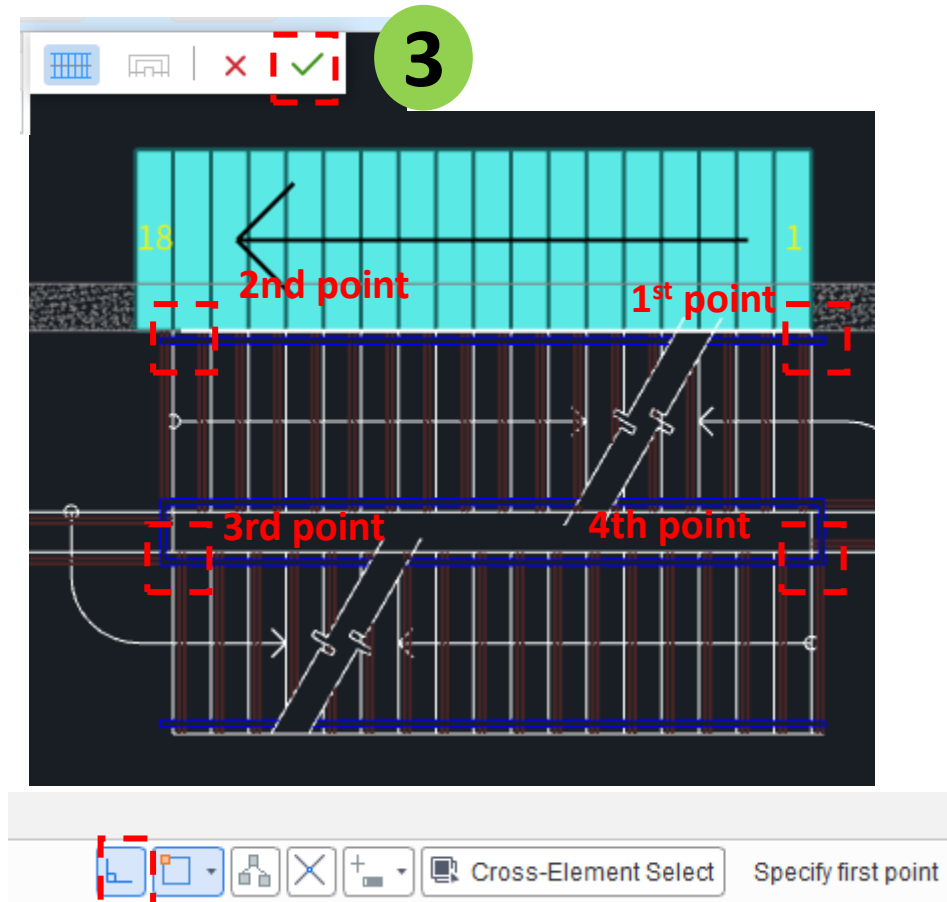
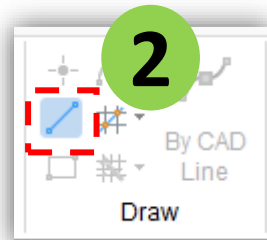
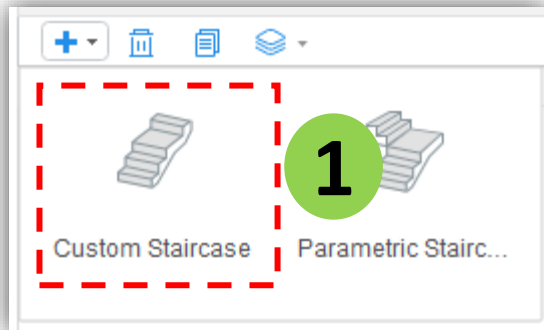
Distance to Edge (mm): 75

3D visualization of the staircase layout with railings.

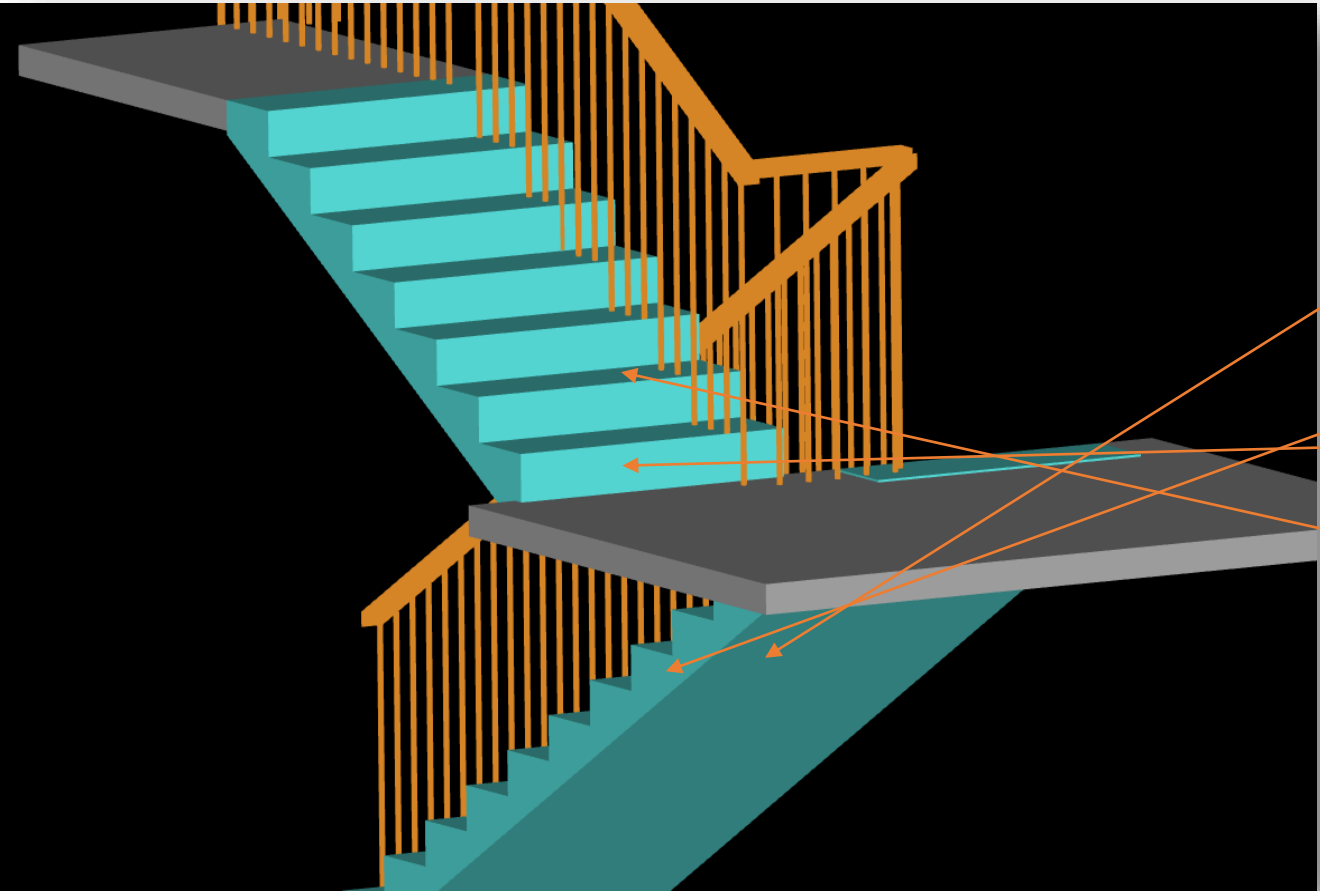
OKCancel

5.5a Draw Staircase

- Step 1: Tab {Draw}, Select Staircase-Custom Staircase
- Step 2: Use Line to draw Staircase ,F4 switch the insert point;
*suggest to open Orthogonal model when draw staircase
- Step 3: Click Ok to finish



Quantity of Staircase



Projected area	$8.776 \text{ <Original projected area>}$	8.776
Volume	$1.200 \text{ <Volume of flight>} + 0.327 \text{ <Volume of landing slab>}$	1.527
Volume of concrete of flight		1.200
Volume of concrete of landing slab		0.327
Area of formwork	$7.236 \text{ <Area of formwork to soffit of flight>} + 2.738 \text{ <Area of formwork to landing slab>} + 2.182 \text{ <Area of formwork to open string>} + 3.465 \text{ <Area of formwork to riser>} + 0.773 \text{ <Area of formwork to edge and break of landing slab>}$	16.395
Area of formwork to flight	$7.236 \text{ <Area of formwork to soffit of flight>} + 2.182 \text{ <Area of formwork to open string>} + 3.465 \text{ <Area of formwork to riser>}$	12.883
Area of formwork to landing slab	$2.738 \text{ <Area of formwork to landing slab>} + 0.773 \text{ <Area of formwork to edge and break of landing slab>}$	3.512
Area of open string		2.182
Area of riser		3.465
Area of tread		5.748
Length of nosing		23.100
Length of handrail		6.972

Quantity of Staircase(cont'd)

Notes:

Which quantity to extract for STAIRCASE (structural)

Quantity you need	Quantity to extract from Glodon		
Concrete (m3)	Volume of Concrete Flight	Volume of Concrete of Landing Slab	
Formwork (m2)	Area of Formwork to Flight	Area of Formwork to Landing Slab	
Formwork (m)	Length of formwork to Open String in Stage	Length of Formwork to Riser in Stages	Length of Formwork to Edge and Break of Landing Slab

1	Entity Location: <4+5248;D+8311>				
2	Projected Area	PA	11.920<Original Projected Area>	11.920	m2
3	Volume	V	1.055<Volume of Flight>+0.632<Volume of Landing Slab>	1.687	m3
4	Volume of Concrete of Flight	VCF		1.055	m3
5	Volume of Concrete of Landing Slab	VCLS		0.632	m3
6	Area of Formwork	AF2	6.353<Area of Formwork to Soffit of Flight>+6.320<Area of Formwork to Landing Slab>	12.673	m2
7	Area of Formwork to Flight	AFF	6.353<Area of Formwork to Soffit of Flight>	6.353	m2
8	Length of Formwork to Open String in Stages(0.1~0.2m)	LFOSS1		0.214	m
9	Length of Formwork to Open String in Stages(0.2~0.3m)	LFOSS2		12.706	m
10	Length of Formwork to Riser in Stages(0.1~0.2m)	LFRS1		20.000	m
11	Area of Formwork to Landing Slab	AFLS	6.320<Area of Formwork to Landing Slab>	6.320	m2
12	Length of Formwork to Edge and Break of Landing Slab in Stages(0~0.1m)	LFEBLSS(0~0.1m)		13.560	m
13	Area of Open String	AOS		2.111	m2
14	Area of Riser	AR		3.000	m2
15	Area of Tread	AT1		5.040	m2
16	Length of Straight Skirting	LSS1		20.120	m
17	Length of Sloping Skirting	LSS2		13.198	m
18	Area of Finish to Soffit	AFS1	5.414<Area of Finish to Landing Slab>+6.353<Area of Flight>	11.767	m2
19	Area of Sloping Skirting	ASS2		3.112	m2
20	Length of Antislip Strip	LAS		20.000	m
21	Length of Handrail	LH		9.233	m
22	Length of Wall Mounted Handrail	LW...		13.198	m
23	Weight of Rebar	WR	1.687<Volume>*80.000<Steel Ratio>	0.135	t
24	Number	N		1	pc

Quantity of Staircase(cont'd)

Notes:

Which quantity to extract for STAIRCASE (architectural)

Quantity you need	Quantity to extract from Glodon	
Flooring (m2)	Projected Area - Area of Tread	
Flooring (m)	Length of Antislip Strip	Length of Straight/ Sloping Skirting
Ceiling (m2)	Area of Finish to soffit	
Handrail (m)	Length of Handrail	Length of Wall Mounted Handrail

1	Entity Location: <4+5248;D+8311>				
2	Projected Area	PA	11.920<Original Projected Area>	11.920	m2
3	Volume	V	1.055<Volume of Flight>+0.632<Volume of Landing Slab>	1.687	m3
4	Volume of Concrete of Flight	VCF		1.055	m3
5	Volume of Concrete of Landing Slab	VCLS		0.632	m3
6	Area of Formwork	AF2	6.353<Area of Formwork to Soffit of Flight>+6.320<Area of Formwork to Landing Slab>	12.673	m2
7	Area of Formwork to Flight	AFF	6.353<Area of Formwork to Soffit of Flight>	6.353	m2
8	Length of Formwork to Open String in Stages(0.1~0.2m)	LFOSS...		0.214	m
9	Length of Formwork to Open String in Stages(0.2~0.3m)	LFOSS...		12.706	m
10	Length of Formwork to Riser in Stages(0.1~0.2m)	LFRS(...)		20.000	m
11	Area of Formwork to Landing Slab	AFLS	6.320<Area of Formwork to Landing Slab>	6.320	m2
12	Length of Formwork to Edge and Break of Landing Slab in Stages(0~0.1m)	LFEBLSS(0~...		13.560	m
13	Area of Open String	AOS		2.111	m2
14	Area of Riser	AR		3.000	m2
15	Area of Tread	AT1		5.040	m2
16	Length of Straight Skirting	LSS1		20.120	m
17	Length of Sloping Skirting	LSS2		13.198	m
18	Area of Finish to Soffit	AFS1	5.414<Area of Finish to Landing Slab>+6.353<Area of...	11.767	m2
19	Area of Sloping Skirting	ASS2		3.112	m2
20	Length of Antislip Strip	LAS		20.000	m
21	Length of Handrail	LH		9.233	m
22	Length of Wall Mounted Handrail	LW...		13.198	m
23	Weight of Rebar	WR	1.687<Volume>*80.000<Steel Ratio>	0.135	t
24	Number	N		1	pc

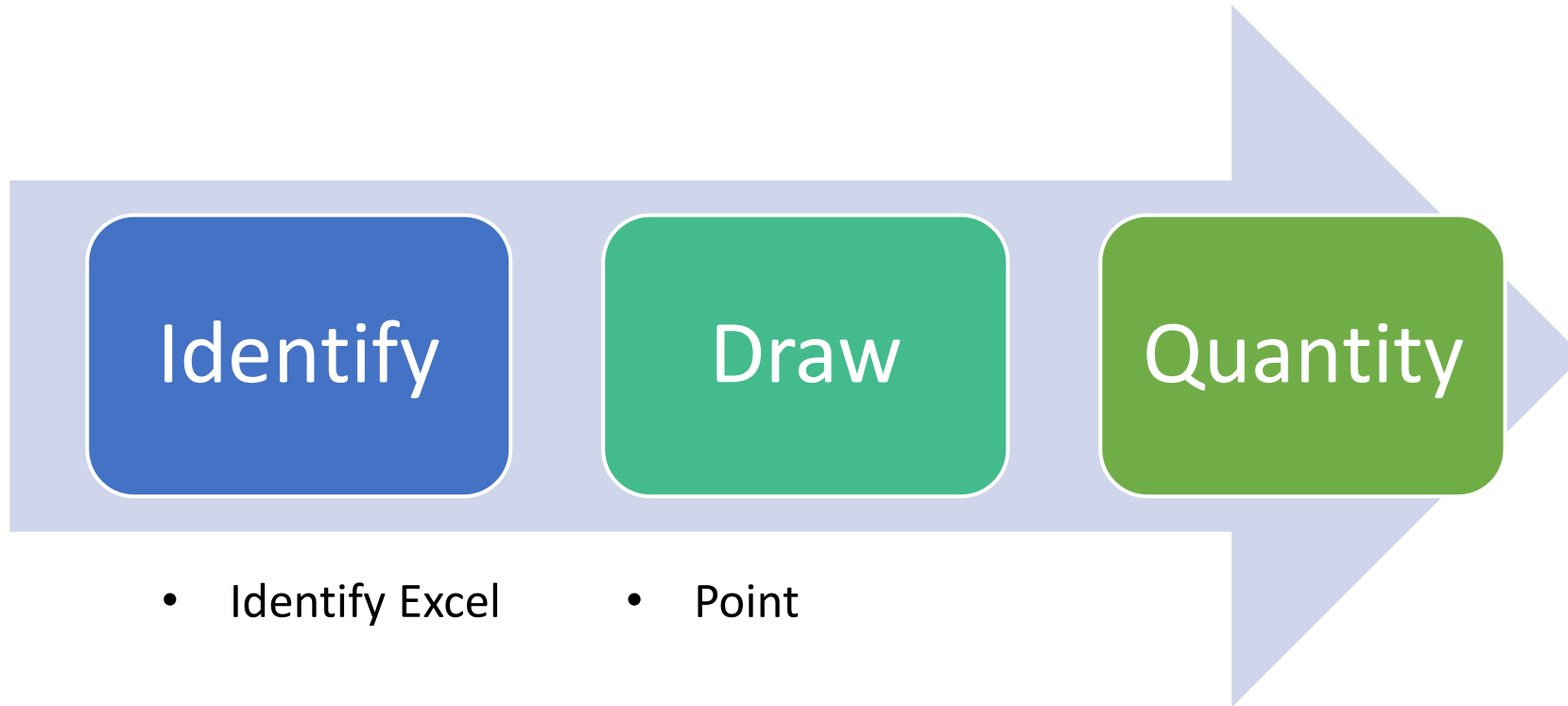
Point Type

- Axis
- Segmentation
- Column
- Wall
- Door/Window Opening
- Beam
- Slab
- Steel Structure
- Staircase
- Finishes
 - Room(R)
 - Floor Finish(F)
 - Waterproof(P)
 - Skirting(T)
 - Wall Finish(U)
 - Ceiling Finish(E)
 - Suspended Ceiling(H)
- Prefabrication
- Foundation
- Excavation
- Others
- Custom Element
- Custom Quantity



FINISHES

5.7 Finishes



5.7 Finishes



Flooring



Skirting



Suspended Ceiling



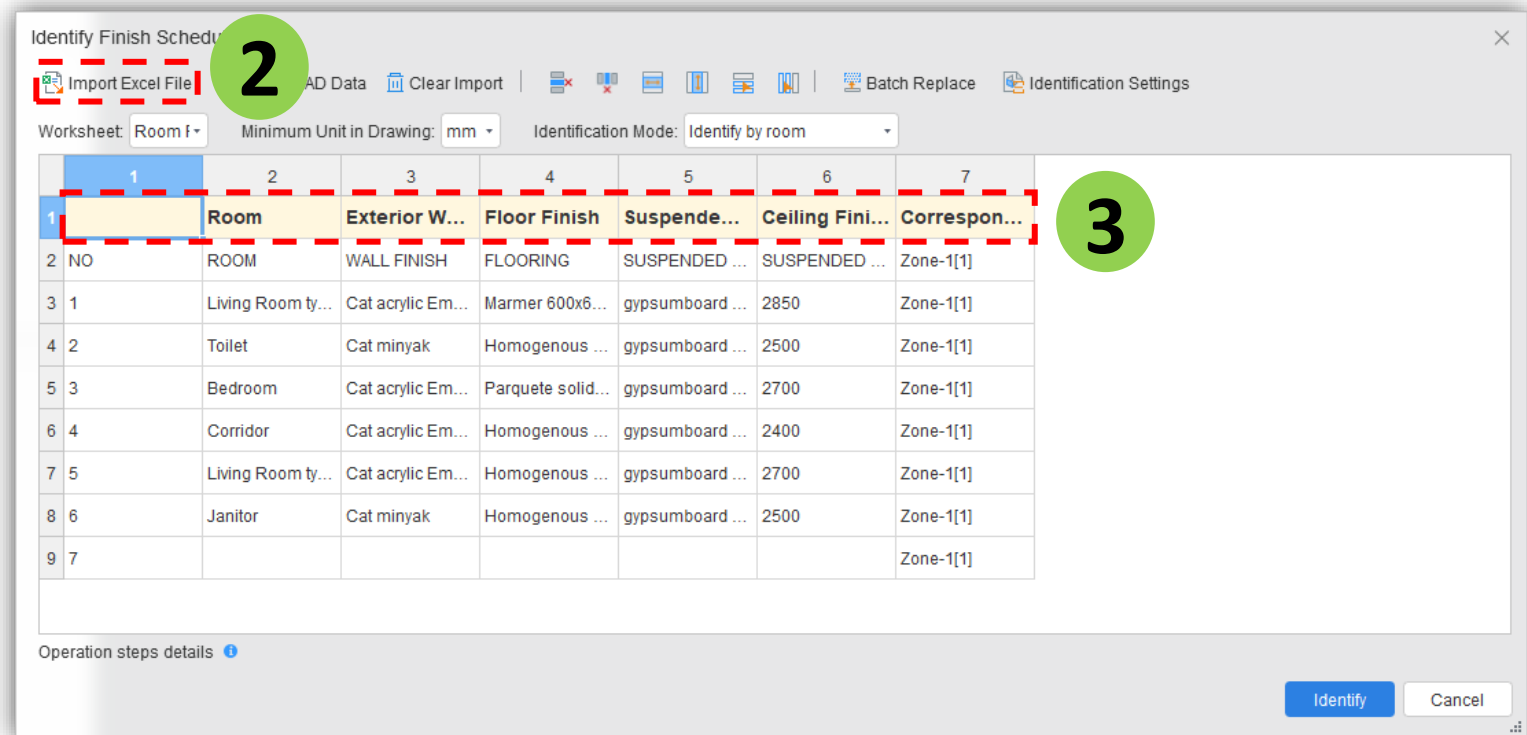
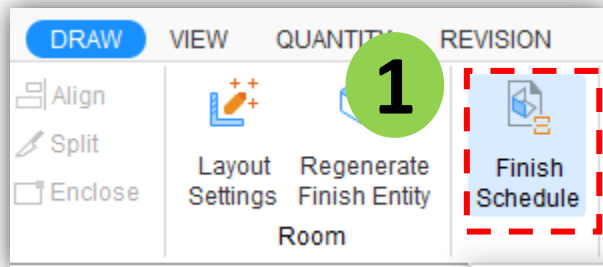
Wall Finishes



Ceiling

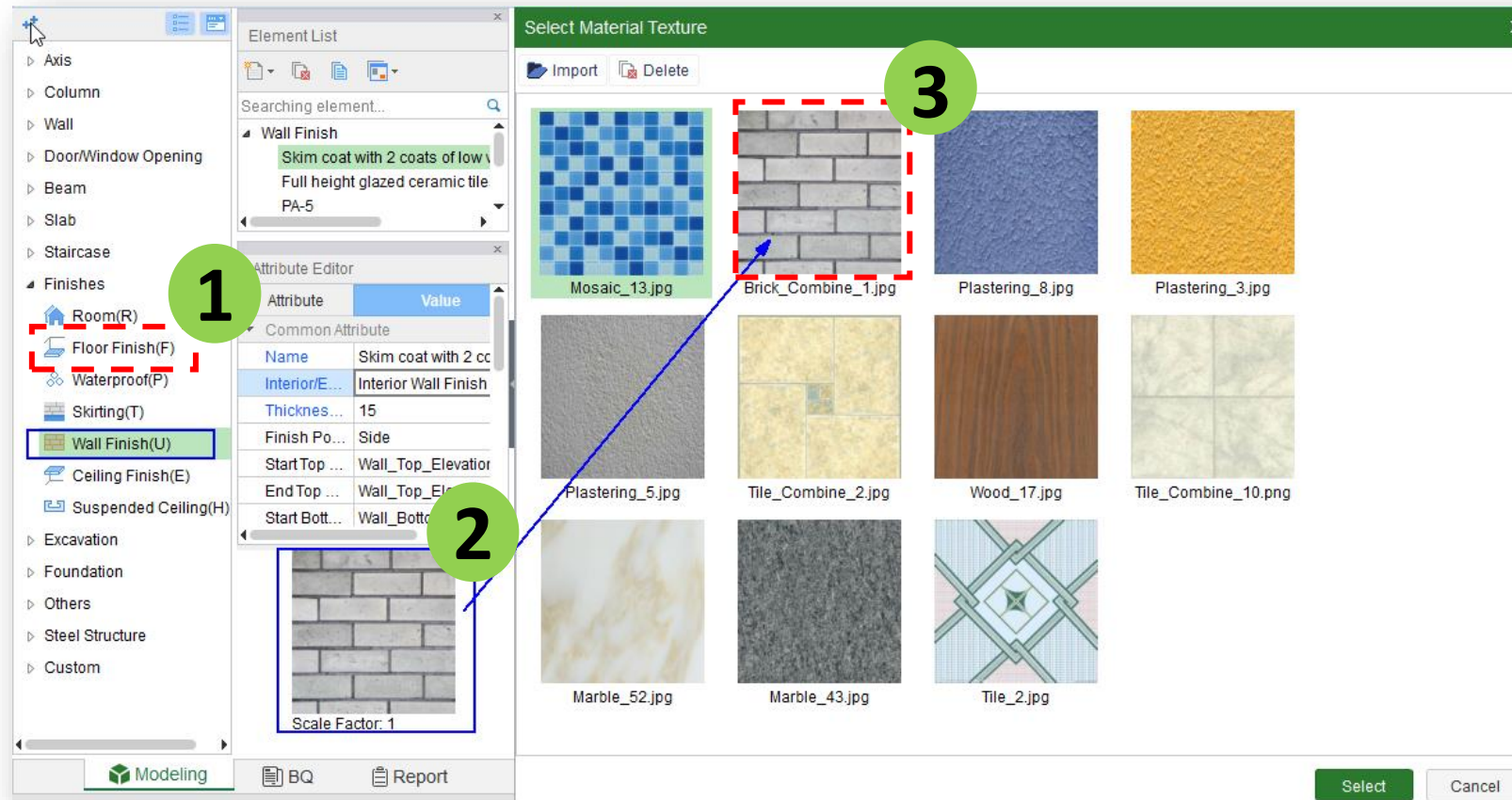
5.7a Identify Finishes Schedule in Excel

- Step 1: Tab {Draw}, Select **Finish Schedule**
- Step 2: **Import** Excel File
- Step 3: **Nominate** the corresponding column & **Identify**



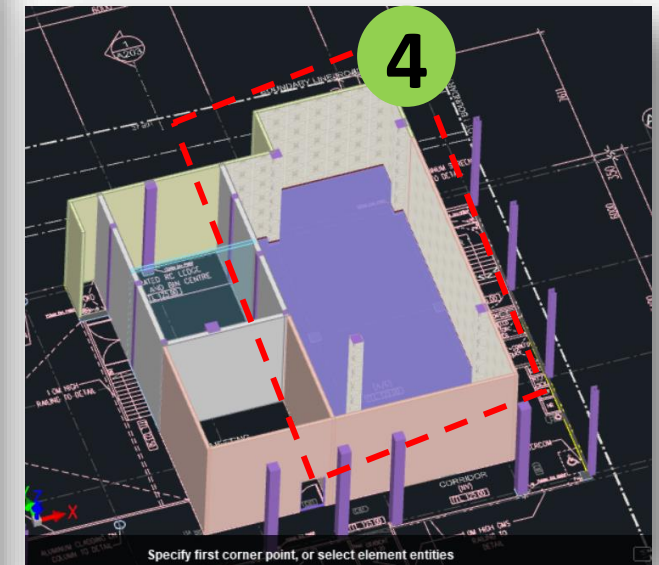
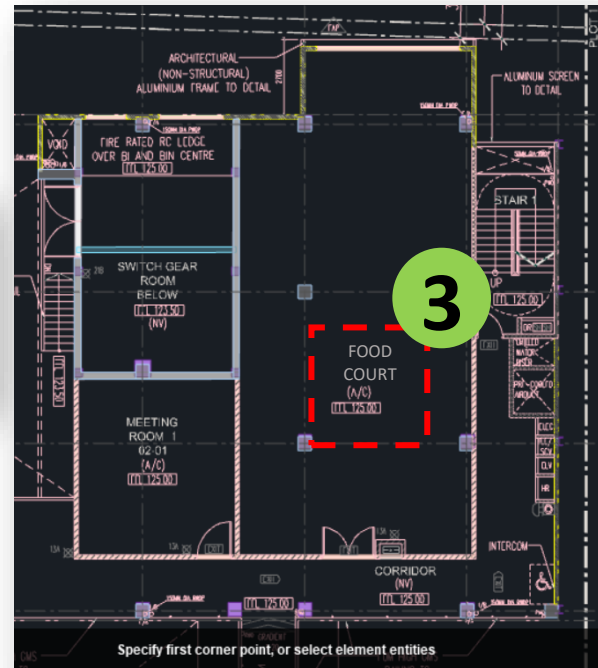
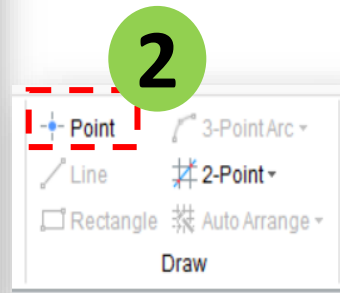
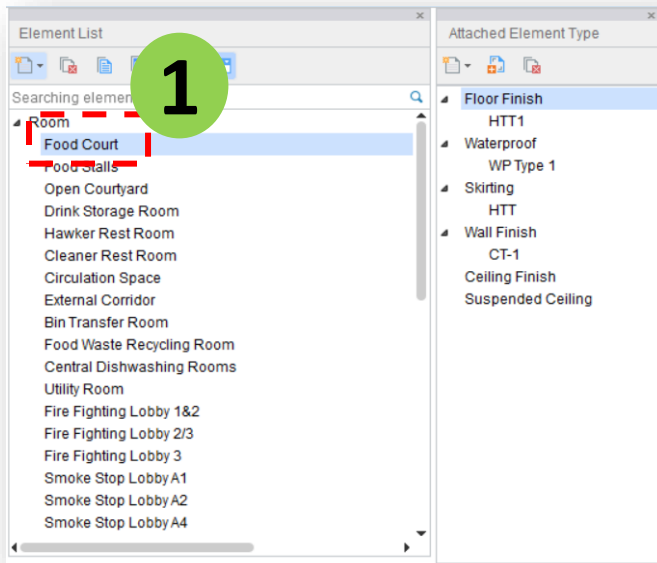
5.7a Change Finishing Material Texture

- **Step 1:** Tab {Draw}, Choose **Floor Finishes / Wall Finishes**
- **Step 2:** Double click **Material Texture Area**
- **Step 3:** Choose the **material texture** and select to confirm and attached



5.7b Draw Finishes

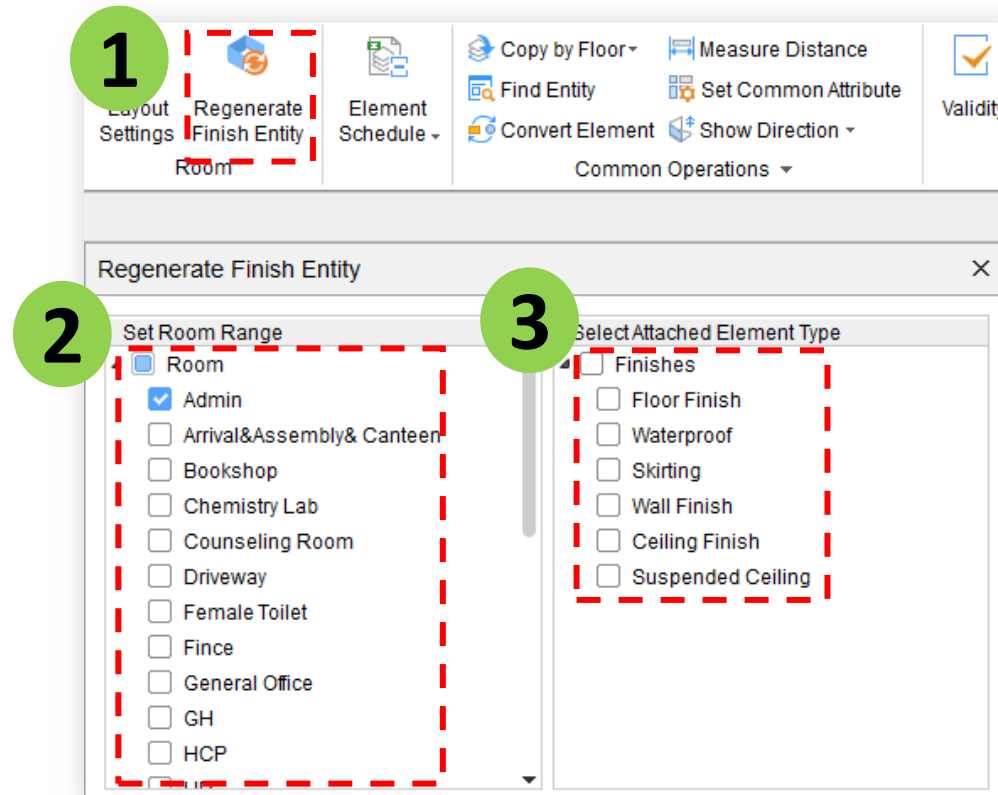
- Step 1: Tab {Draw}, pick the room
- Step 2: Select [Point]
- Step 3: Find the room in the Archi Plan Drawing
- Step 4: Room materials will be attached to the room with 3D



5.7b Draw Finishes (cont'd)

After laying out finishes by room, some finishes in the room change.

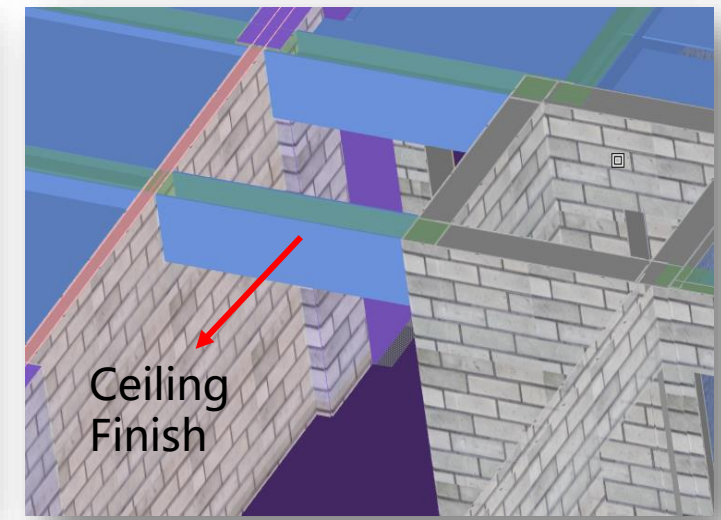
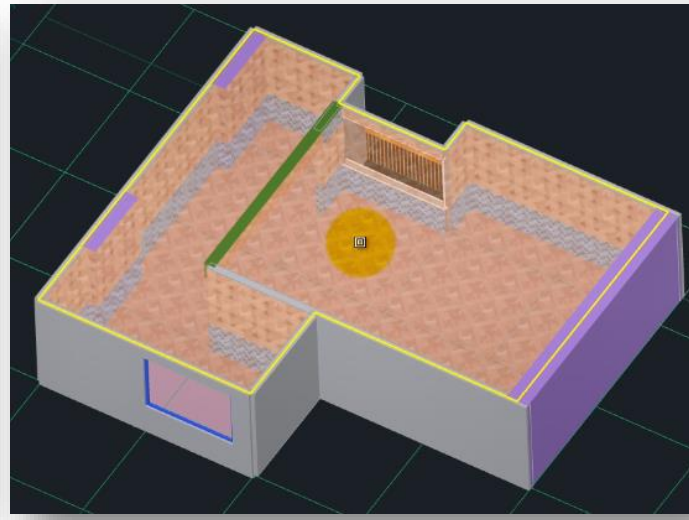
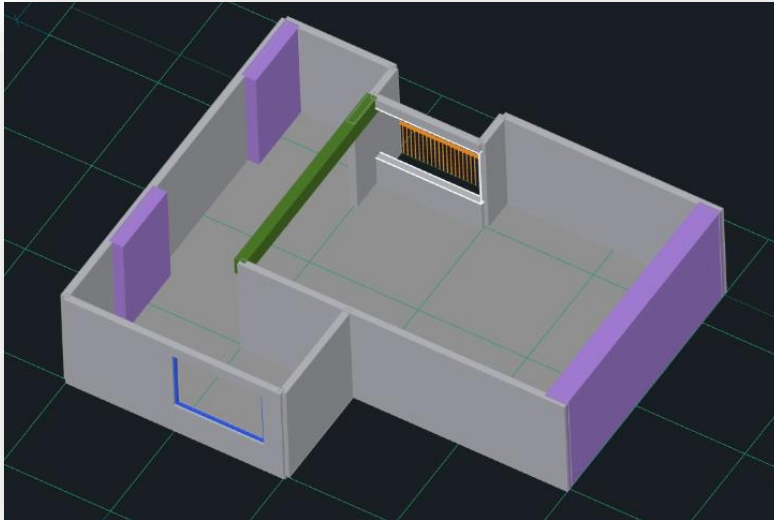
You can refresh all finishes in the room of the project this floor rapidly by using [\[Regenerate Finish Entity\]](#).



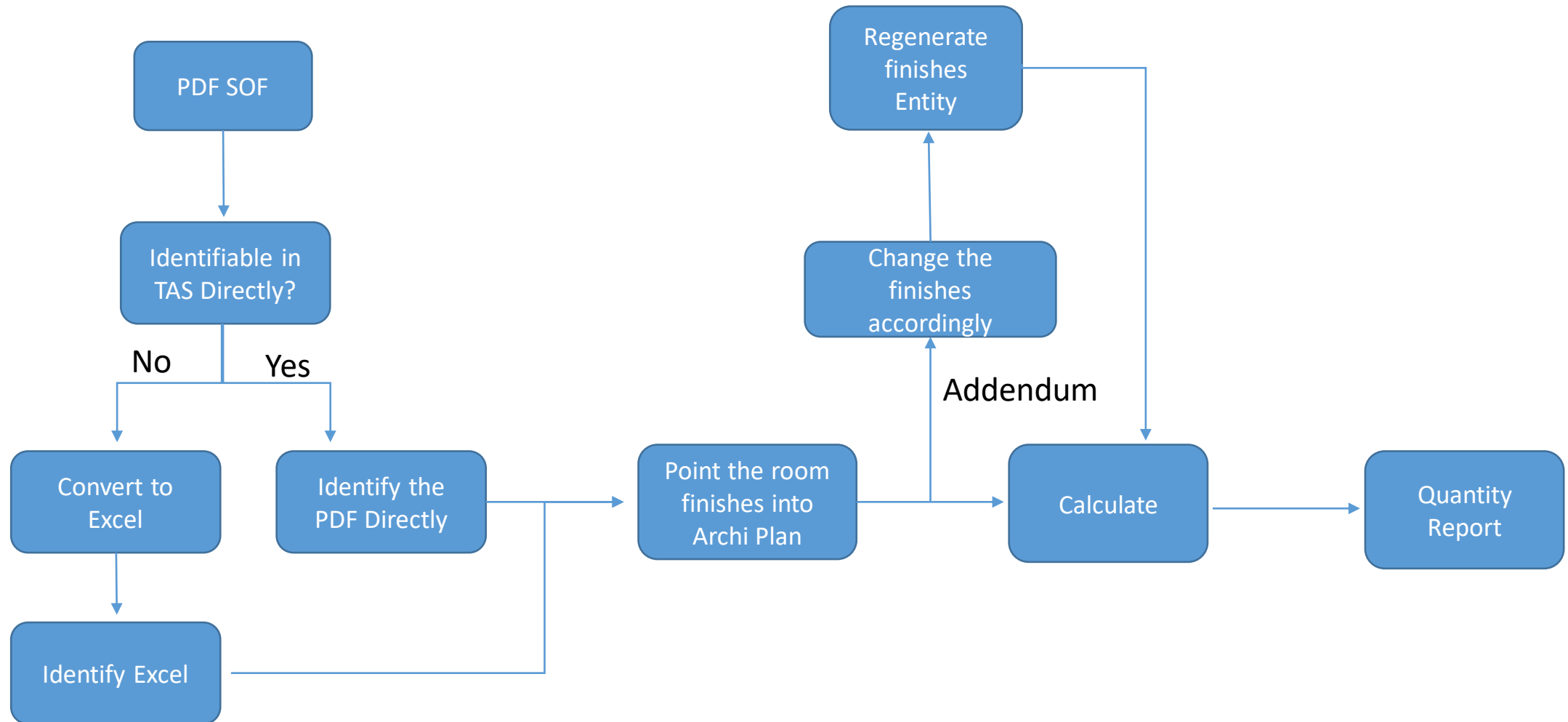
5.7c Quantity of Finishes

Notes:

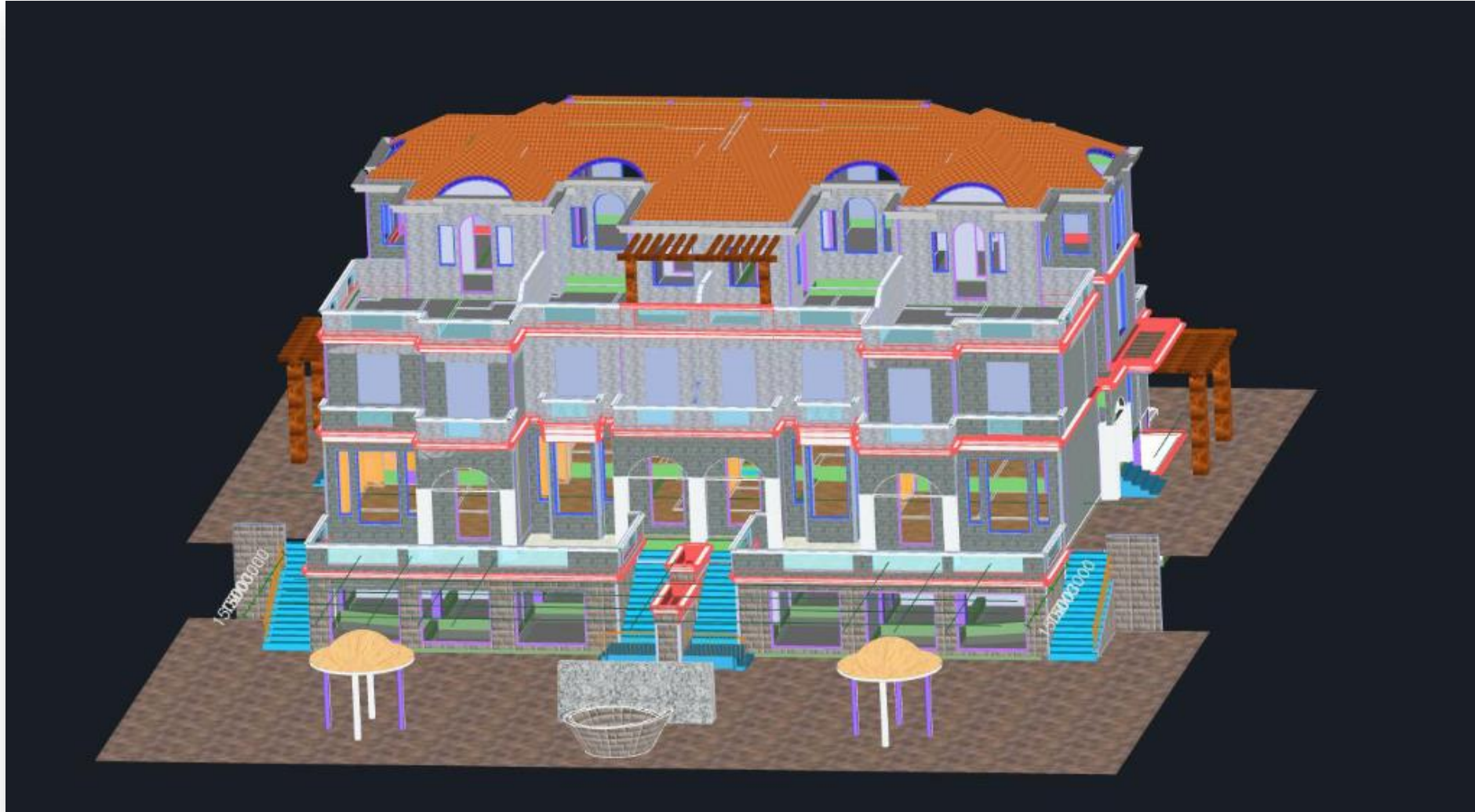
- Column can be part of the enclosed area
- Column protruding area will be captured automatically
- Upper floor beam exposed finishes will be captured automatically



5.7 Recommended Flow for Finishes



5.7 Finishes Material Texture



View Quantity by Category



6.0 Report

Use [View Quantity by Category] to Regenerate report

- Step 1: Click [Set classification and Quantity]
- Step 2: Tick attribute, move up/down

View Quantity by Category

1

Set Classification and Quantity

Column	Floor	Material	Volume(m3)	Area of Formwork(<=3.5 m)(m2)	Area of Formwork for Strutting High(3.5~5m)(m2)	Weight of Rebar(t)
1	Basement 2	In-situ Concrete	19.800	156.271		2.970
2		Subtotal	19.800	156.271		2.970
3	Basement 1	In-situ Concrete	25.800	194.671		3.870
4		Subtotal	25.800	194.671		3.870
5	1st Floor	In-situ Concrete	33.000	196.000	72.257	5.263
6		Subtotal	33.000	196.000	72.257	5.263
7	2nd Floor	In-situ Concrete	23.100	184.124		3.465
8		Subtotal	23.100	184.124		3.465
9	3rd Floor	In-situ Concrete	23.100	184.271		3.465
10		Subtotal	23.100	184.271		3.465
11	4th Floor	In-situ Concrete	23.100	184.271		3.465
12		Subtotal	23.100	184.271		3.465
13	Roof	In-situ Concrete	16.500	128.271		2.475
14		Subtotal	16.500	128.271		2.475
15	Upper Roof	In-situ Concrete	1.920	19.200		0.288
16		Subtotal	1.920	19.200		0.288

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

Reversely-Check Model

Set Classification and Quantity Output

2

Element Type	Classification Condition	Use	Value
Column	1 Zone	☐	
Wall	2 Floor	☒	
Door	3 Material	☒	
Window	4 Concrete Grade	☐	
Wall Opening	5 Entity Type	☐	
Ribbon Window	6 Name	☐	
Lintel	7 Name Suffix	☐	
Beam	8 Section Shape	☐	
In-situ Slab	9 Section Width	☐	
Precast Slab	10 Section Height	☐	
Slab Opening	11 Category 1	☐	
Steel/Composite Co...	12 Category 2	☐	
Staircase	13 Concrete Type	☐	
Spiral Flight	14 Grout Type	☐	
Room	15 Mortar Type	☐	
Floor Finish	16 Mortar Grade	☐	
Skirting	17 Strutting Height	☐	
Wall Finish	18 Entity ObjectType	☐	
Ceiling Finish	19 Associated Component	☐	
Suspended Ceiling	20 Associated PPVC	☐	
Component			
PPVC			
Unit Type			

Move Up Move Down

Element Quantity

☐ All Quantities

- ☒ Volume
- ☒ Area of Formwork
- ☒ Area of Formwork for Strutting High
- ☒ Volume of Mortar
- ☐ Number
- ☒ Weight of Rebar
- ☐ Girth

OK Cancel

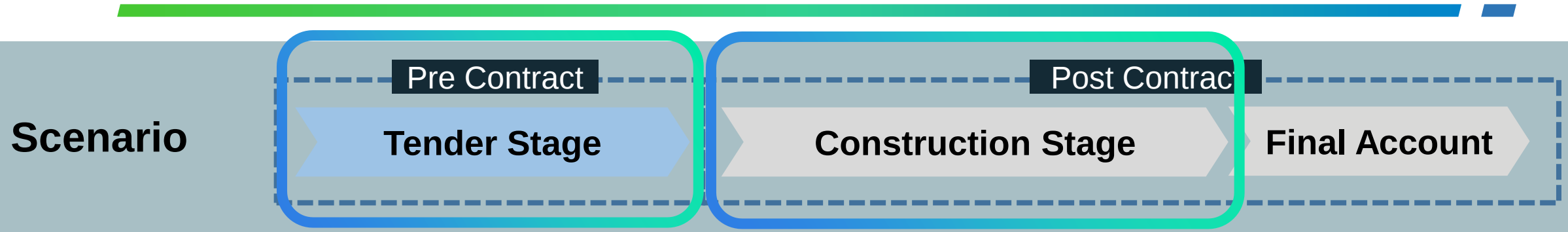


Area Type

Revision



What problems does Revision solve?



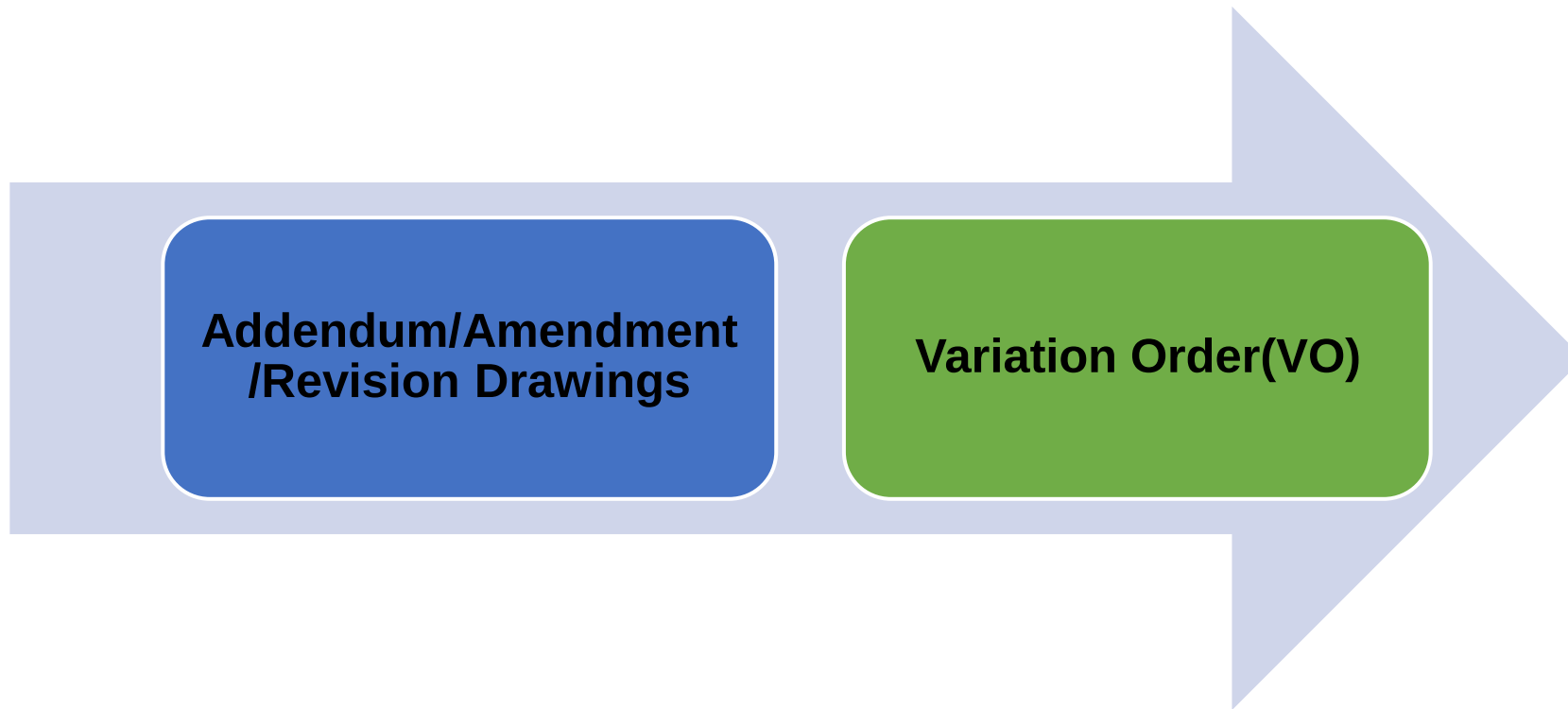
Design / Tender stage

Due to the changes in design, drawings/design models will be updated to QS as addendums or amendments. QS needs to do the qty takeoff again.

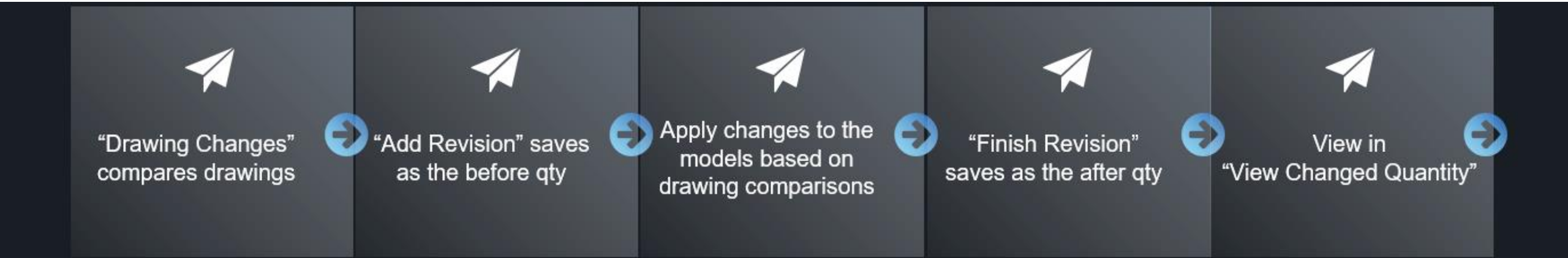
Construction VOs

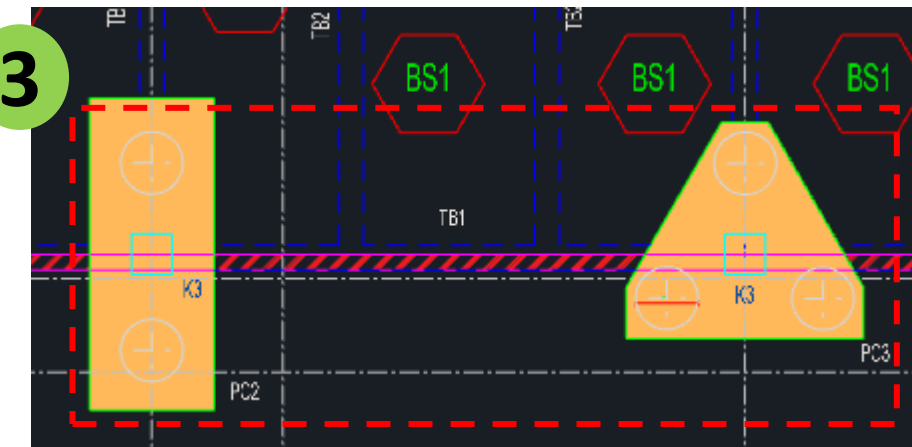
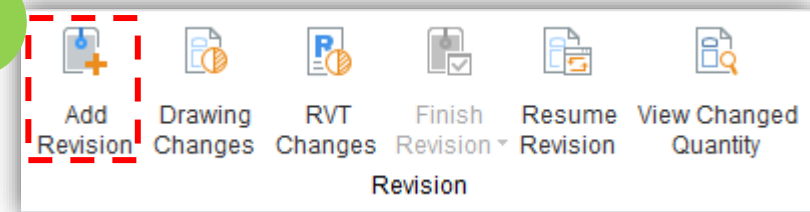
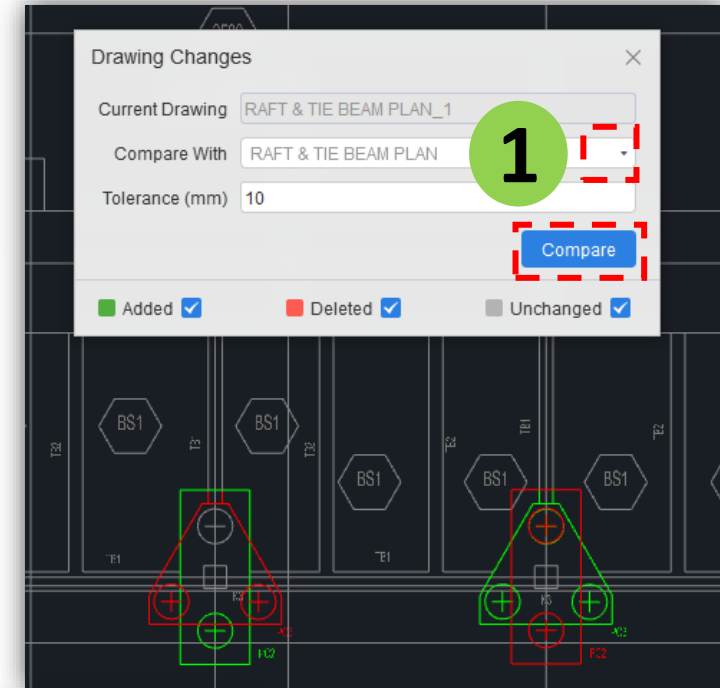
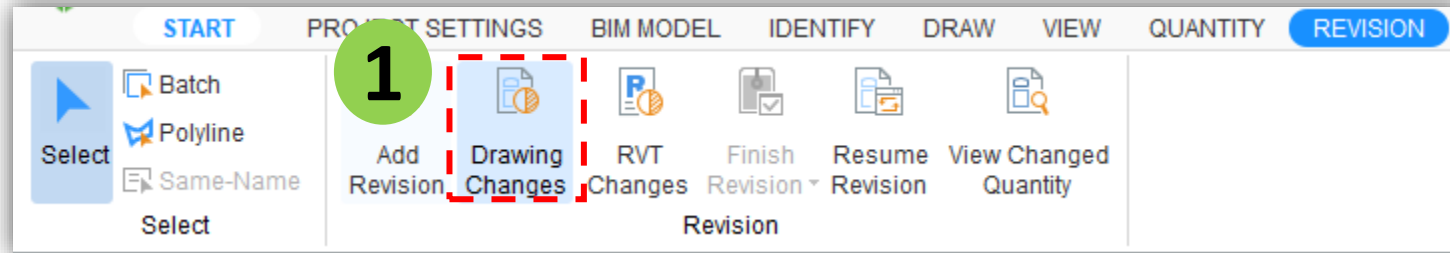
In the construction stage, when receiving/requesting VOs, contractor QS needs to calculate the changes for additions & omissions, build up VO BQ and submit claims.

Helps you to update your revision models and calculate for the changes with auto comparison for drawings.

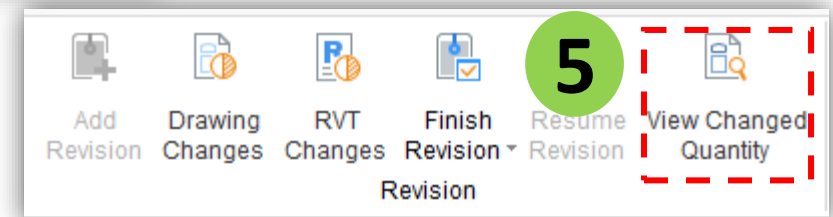
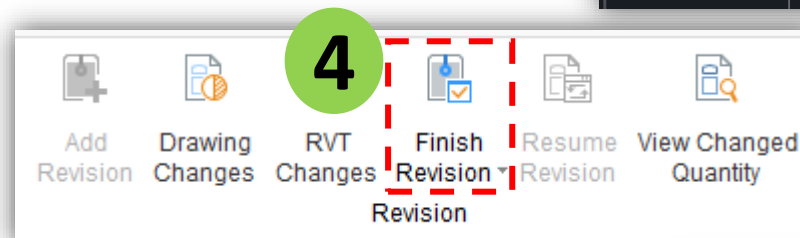


Revision Workflow





Apply changes to the models





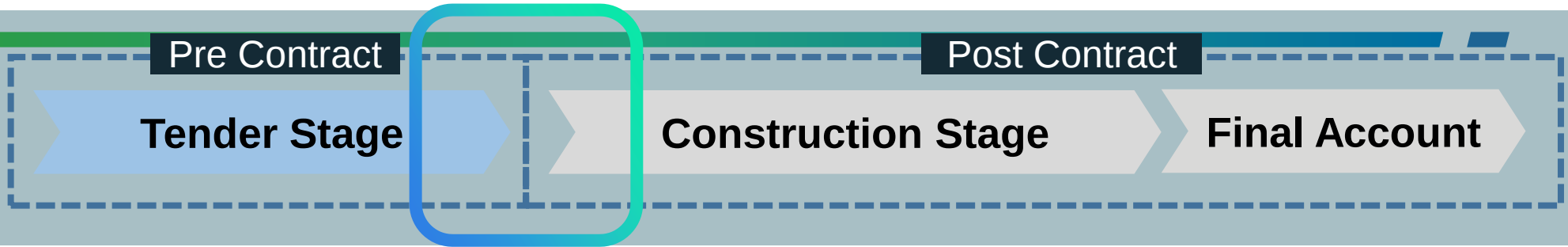
Area Type

Segmentation



What problems does Segmentation solve?

Scenario

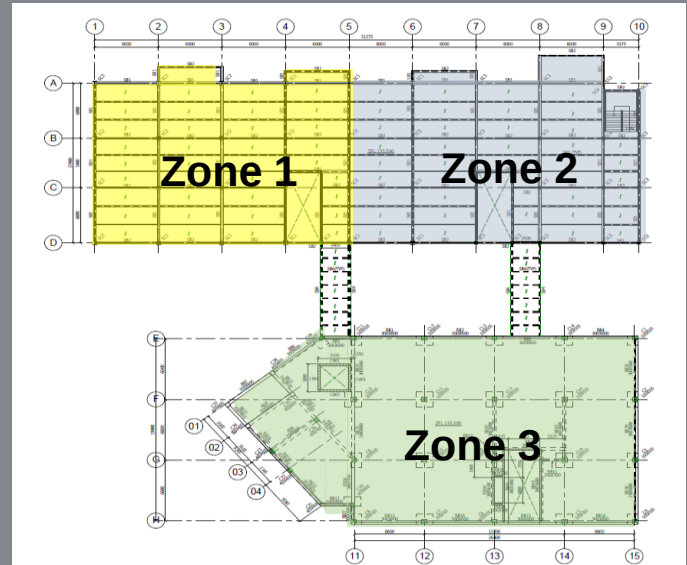


Construction Zone

Construction Zone is used for dividing a large-scale construction project into smaller sections for different biddings or for proper scheduling.

Subcontracting

When subcontracting for procurements, a large-scale construction project might need to be divided into sections for different subcontracting purposes.



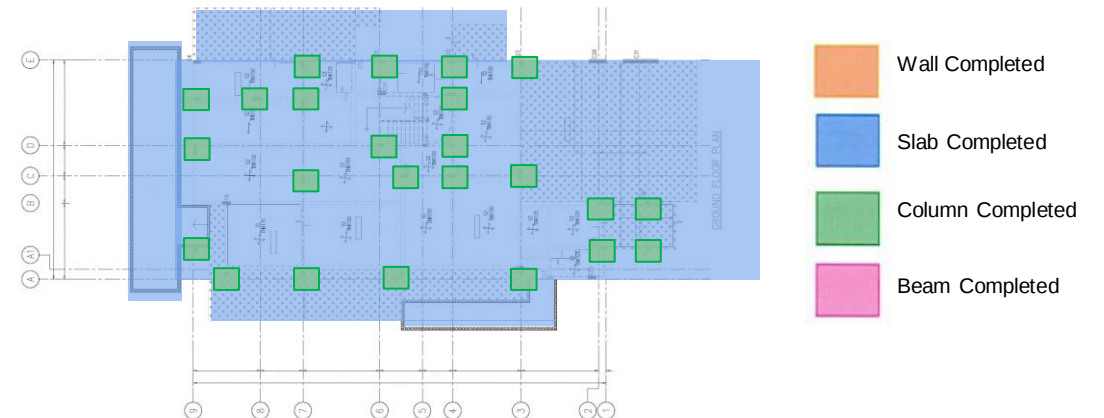
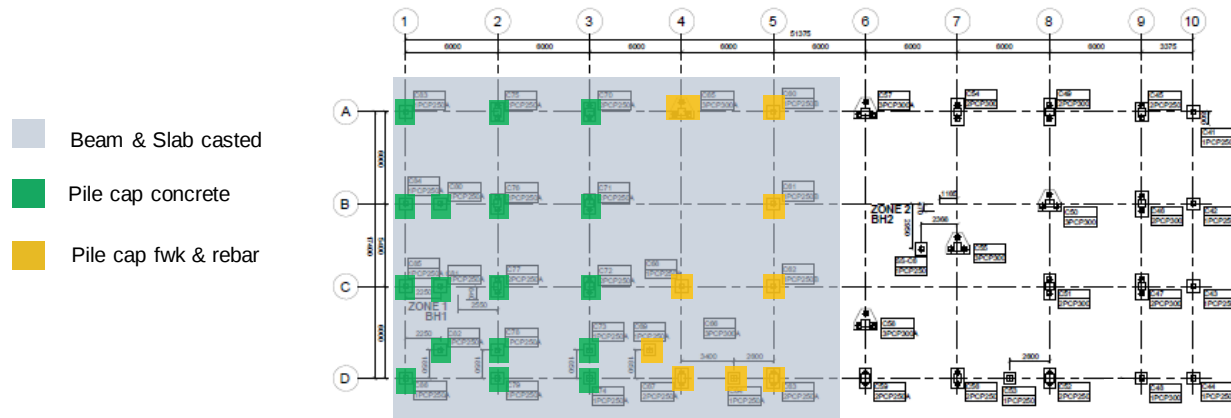
What problems does Segmentation solve?

Scenario



Progress Claim

In the construction stage, the progress claim BQ is established based on the actual work done of each interim, which means only the quantities of some parts of the model need to be extracted.



What's the Segmentation Function?

Segmentation

- A new element type.
- Can be used for dividing models in order to extract the quantities of the partial models.
- 4 types of sub-elements for different scenarios, including construction zone, subcontracting, progress claim, and custom.

Segmentation Workflow



1

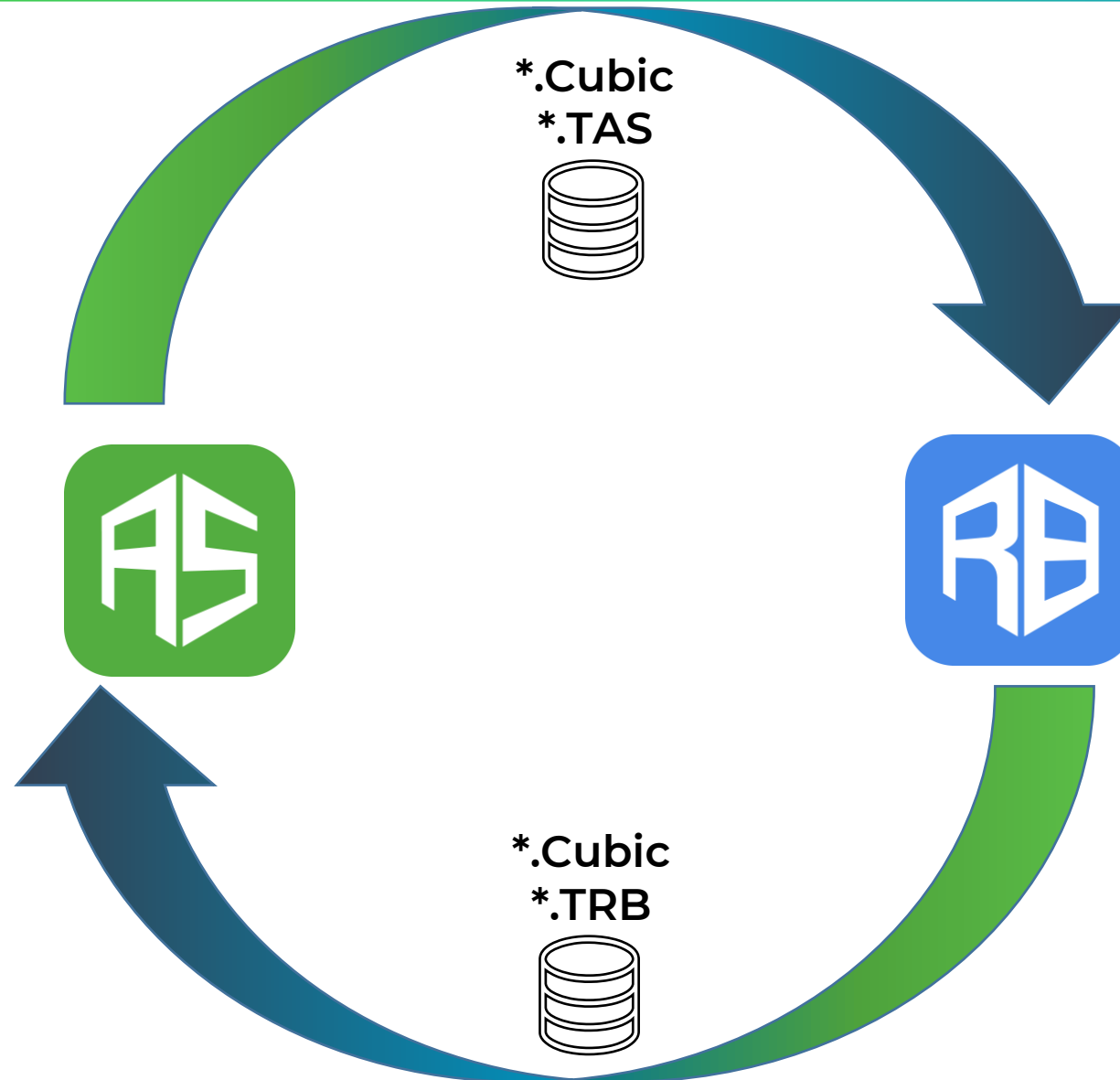
2

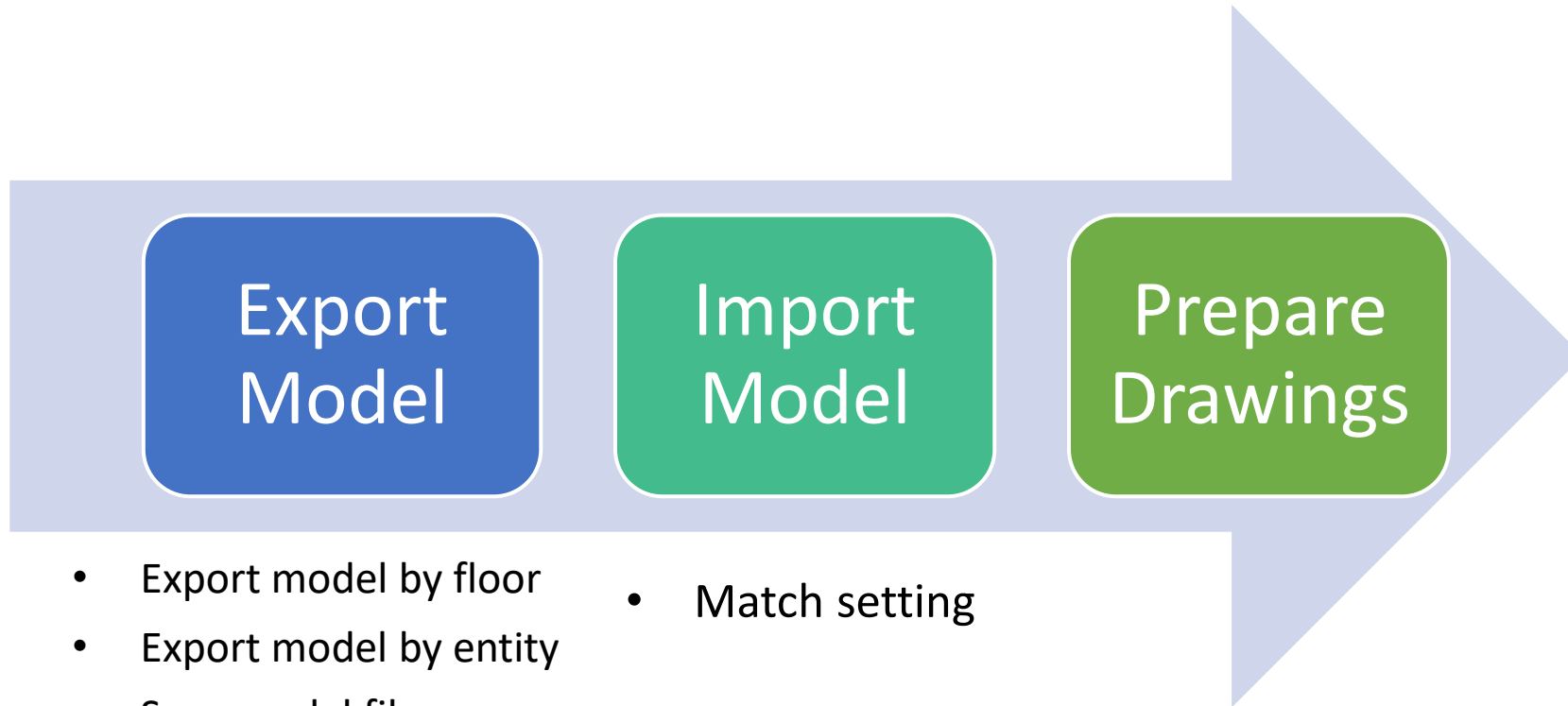
3&4

5

Classification Condition			Quantity	
Progress Claim	Floor	Concrete Grade	Volume(m3)	Area of formwork(<=3.5 m)(m2)
1 Progress Claim-202007	2nd Storey	C32/40	327.865	854.492
2 Progress Claim-202008	2nd Storey	C32/40	292.561	649.562
3 Progress Claim-202009	2nd Storey	C32/40	63.140	71.075
Total			683.567	1575.129

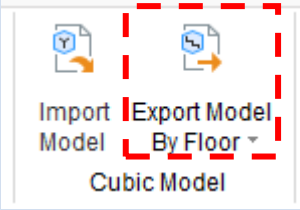
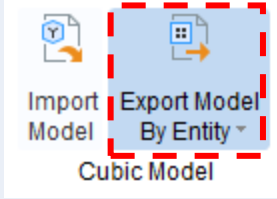
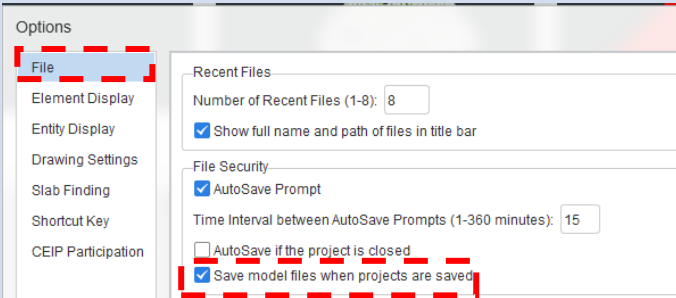
Model Sharing





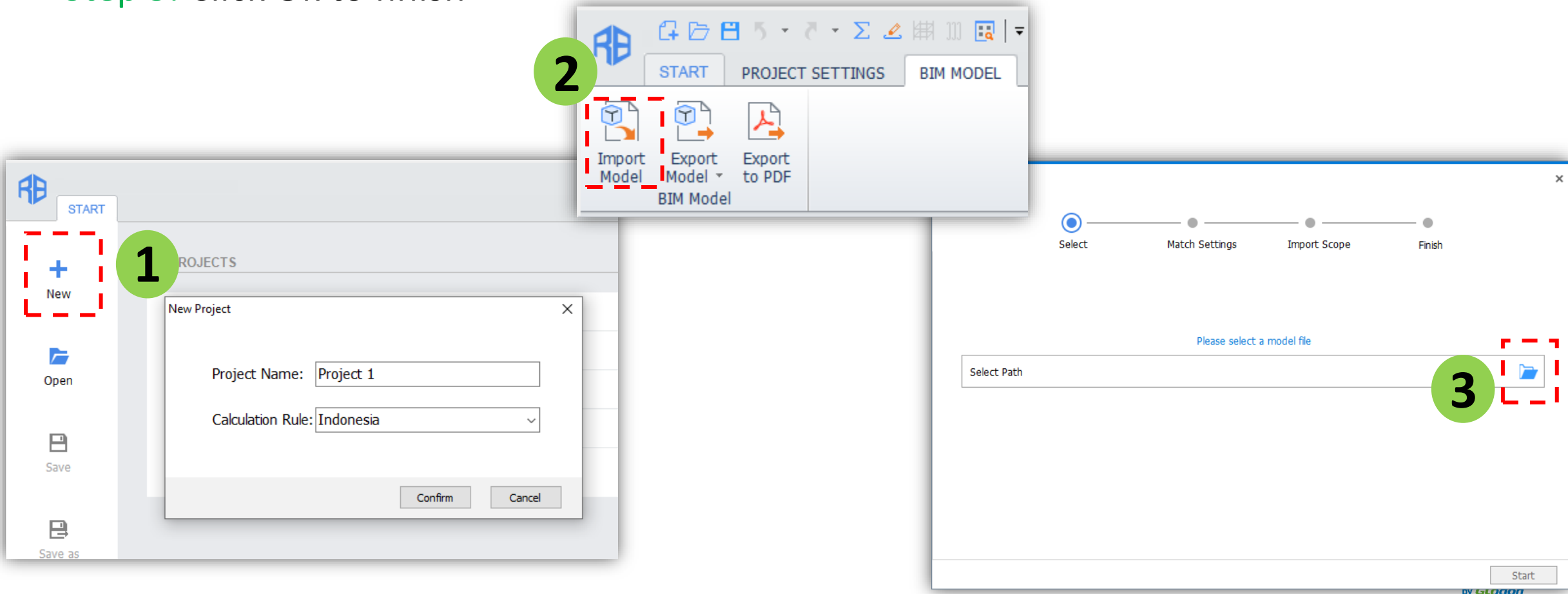
- Export model by floor
- Export model by entity
- Save model files
- Match setting

Export Model

Method	Feature name	Feature Location	Scenario
Method 1	Export Model by floor 	Tab{BIM MODEL},Select <Export Model By Floor>	- File format:*.cubic; - Export all entities of the whole building or a certain floor
Method 2	Export Model by entity 	Tab{BIM MODEL},Select <Export Model By Entity>	- File format:*.cubic; - Once changes happened, Specify certain entities of a certain floor to export
Method 3	Save model files when projects are saved 	Welcome interface - >Options ->Files	- File format:*.TAS; - TAS files will be exported into TRB when the option be ticked

Import Model

- Step 1: New TRB project;
- Step 2: Tab{BIM MODEL} > [Import Model];
- Step 3: Click Ok to finish



Import Model-Match Settings

- **Step 1:** Use **zone** from imported project, or Maintain current project's zone and create **new zone** from imported project
- **Step 2:** Tick **[Use floor height in TAS project]**;
- **Step 3:** Click **Next Step**

Import Model File

Progress: Select (1) — Match Settings — Import Scope — Finish

Match Zone

Please match zone of TRB project and zone of TAS Project

Zone of TAS	Zone of TRB
Zone-1	Zone-1
	Zone-1
	Reverse Create
	Not Import

Floor Height Comparison ⚠ Floor heights are inconsistent.

Zone	Floor Code	Floor Height of TAS Project (m)	Floor Height in TRB Project (m)
Zone-1	2	0.850	3.000
	1	2.100	3.000
	0	3.000	3.000

☒ Use floor height in TAS project

Back Next Step

Import Model-Match Settings

- Step 1: Select [All Floors] importing;
- Step 2: Select [All Elements] importing;
- Step 3: Click Next Step

Import Model File

1

2

Progress: Select (1) — Match Settings — Import Scope — Finish

Floor List

- ☒ All Floors
- ☒ [2]1st Floor
- ☒ [1]Ground Floor
- ☒ [0]Foundation Floor

Element List

TAS element type/category	Element type after	Import?
Axis Grid	Axis Grid	☒
Secondary Axis	Secondary Axis	☒
Construction Zone	Construction Zone	☒
Column		☒
Frame Column	Frame Column	☒
Transfer Column	Transfer Column	☒
Wall Column	Wall Column	☒
End Column	Wall Column	☒
Common Column	Default by name	☒
Encased Composite	Default by name	☒
Stiffener	Stiffener	☒
Wall		☒
RC Wall	RC Wall	☒
Non-RC Wall	Masonry Wall	☒
Door	Door	☒

Back Next Step

Import Model File

Progress: Select — Match Settings — Import Scope — Finish (3)

Importing completed. You are recommended to check validity!

Finish

Import Model-Show models

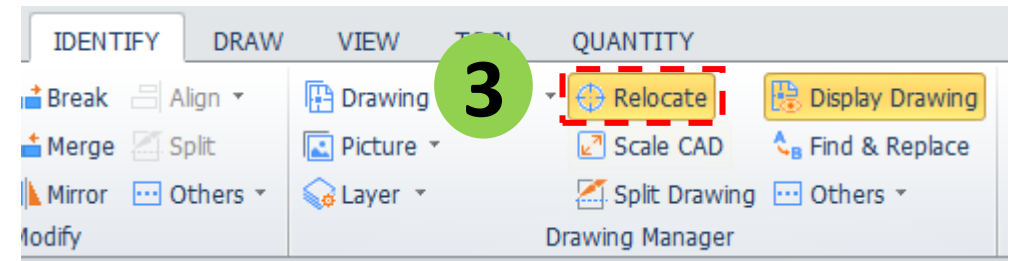
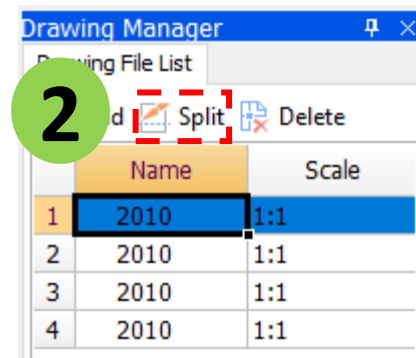
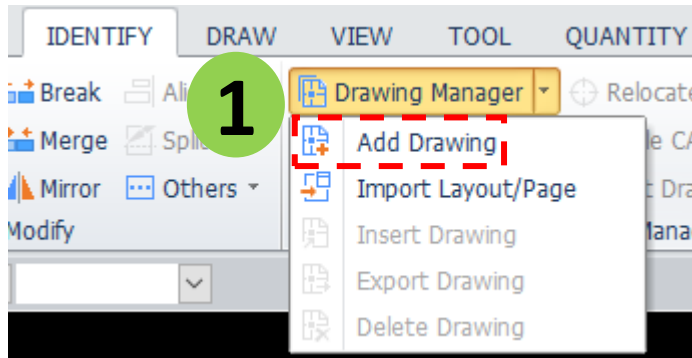
F12 or click here to
set entity display,
✓ tick all elements

Double click
to show
building plan

The screenshot displays the CUBICOST TRB C-III software interface. The main window shows a building plan model on a grid. The 'Element List' panel on the left shows the 'Axis Grid' selected. The 'Element Entity Display Settings - Axis Grid' dialog is open, showing the 'Element entity display' and 'Element entity name display' sections. A green circle with the number '1' highlights the 'All Elements' checkbox in the 'Element entity display' section. A red dashed box highlights the 'OK' button. A green circle with the number '2' highlights the mouse button in a diagram of a mouse. The status bar at the bottom shows 'X=32730 Y=1914', 'Floor height: 3m', 'Bottom Elevation: 0m', '0', 'Hide:0', and 'Cross-Element Select Specify The First Corner Point, Or Pick Element Entity'. The bottom right corner shows '2960.3 FPS' and 'GLodon 180'.

Prepare Drawings (Add , Split & Relocate Drawings)

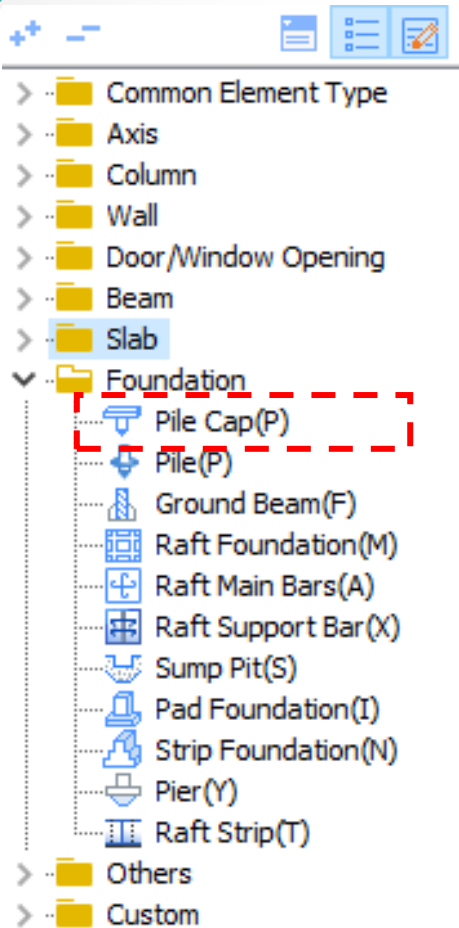
- Step 1: Tab {IDENTIFY}, Select [Add Drawing] importing;
- Step 2: [Split] drawing;
- Step 3: [Relocate] drawing;

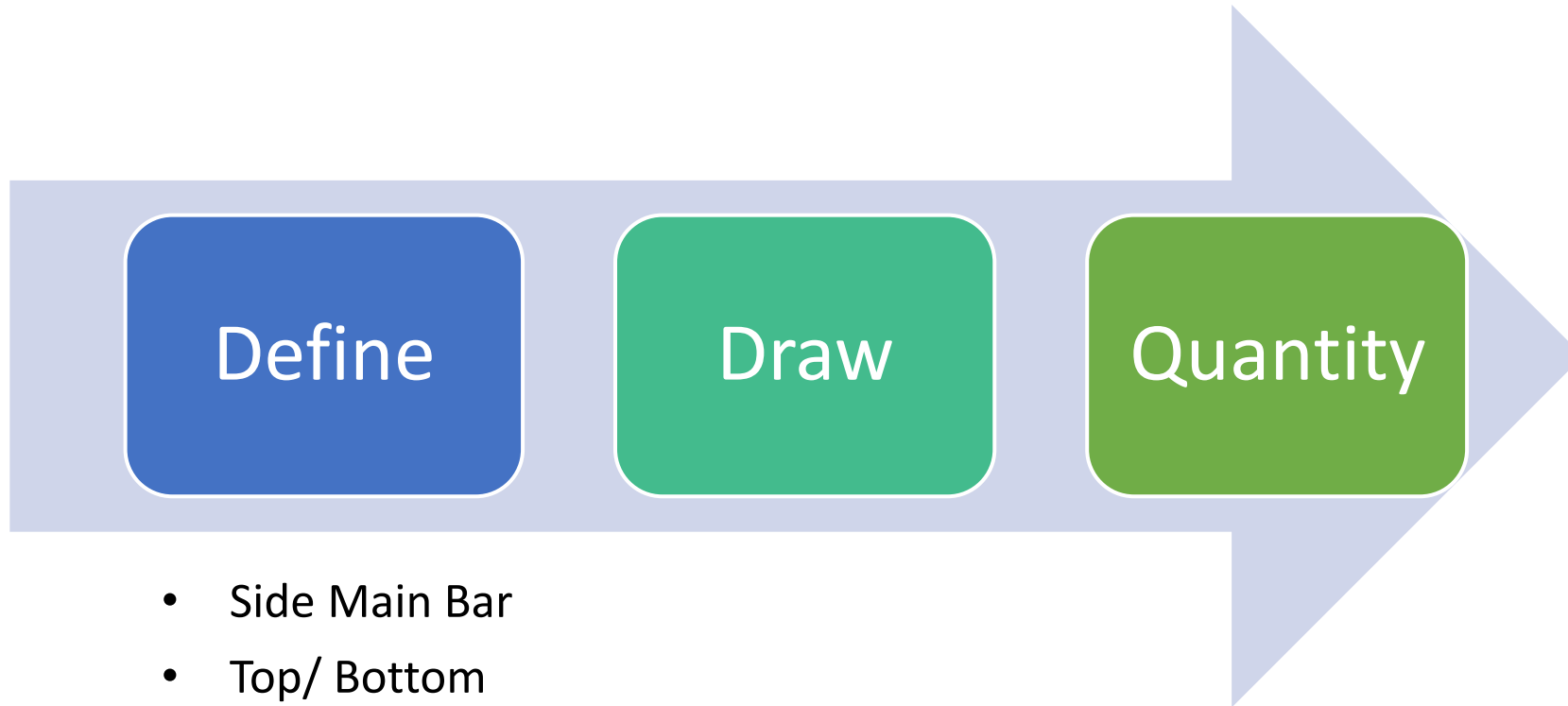


Point Type



Pile Cap





New

Searching element...

Pile Cap

PC1

PC2

From TASC

1

Name

PC1

2

Material

In-Situ

3

Length(mm)

1600

4

Width(mm)

1600

5

Height(mm)

1500

6

Elevation Positioning Method

Top Elevation

7

Top Elevation(m)

Floor_Bottom_Elevation

8

Bottom Elevation(m)

Floor_Bottom_Elevation-1.5

9

Reinforcement Mode

Slab Style Reinforcement

10

Shear Links

11

Other Rebars

12

Remarks

13

Additional Bar On Single Side Of Cap

17

Other Attribute

18

Summary Info

Pile Cap

19

Cover Thickness(mm)

50/50/20

20

Deduct Top Bar Of Slab/Raft

No

21

Deduct Bottom Bar Of Slab/Raft

No

22

Deduct Hooks Of Slab/Raft

Yes

23

Calculation Rule

Calculate by default setting

24

Lap Setting

Calculate by default setting

25

Rebar Strength Setting

Calculate by default setting

26

Tension/Compression Setting

Calculate by default setting

27

Construct

38

Development

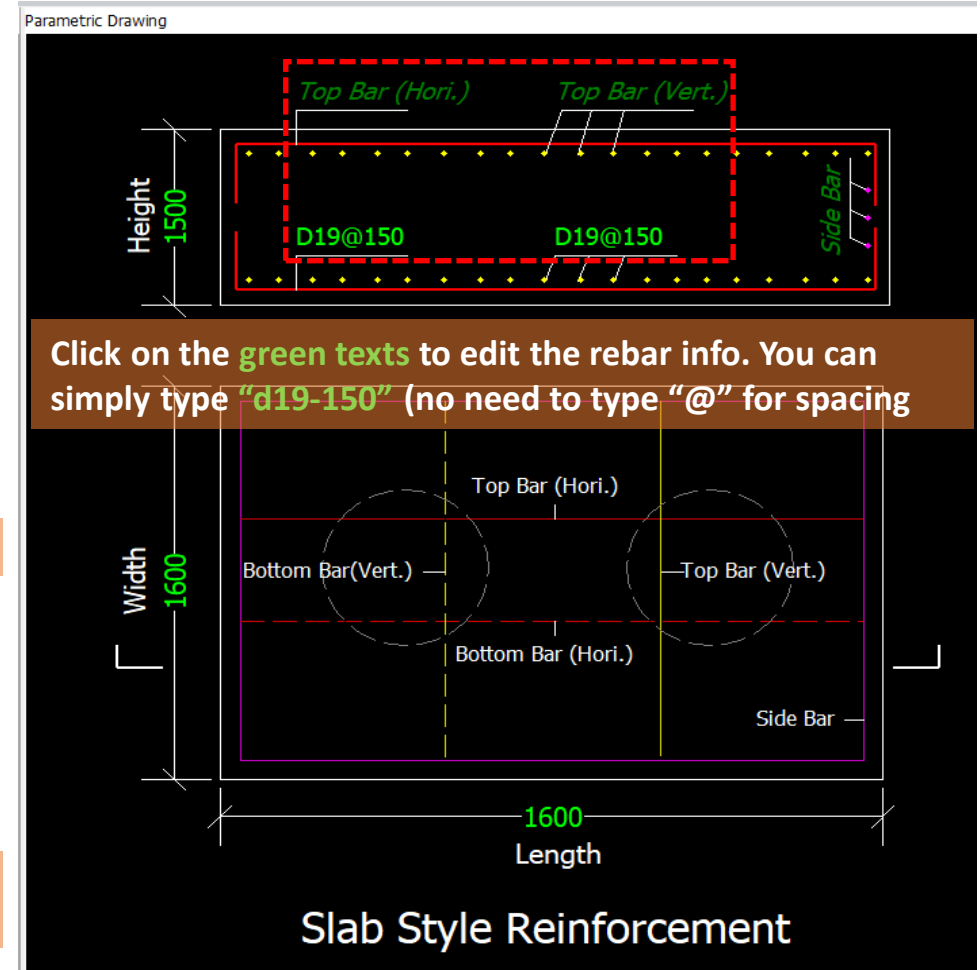
59

Display pattern

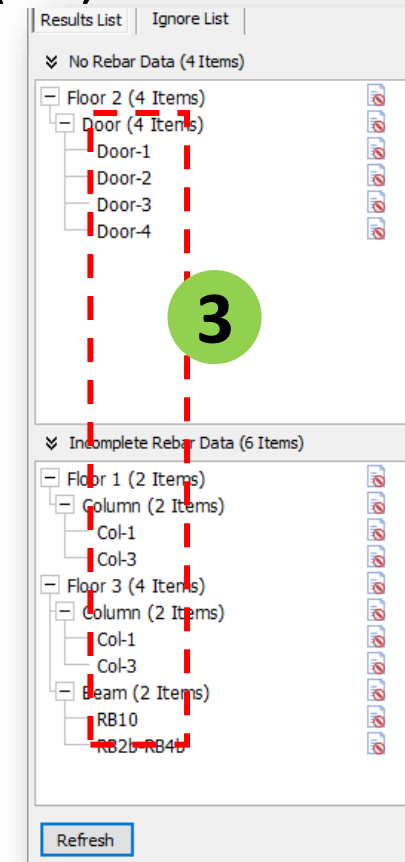
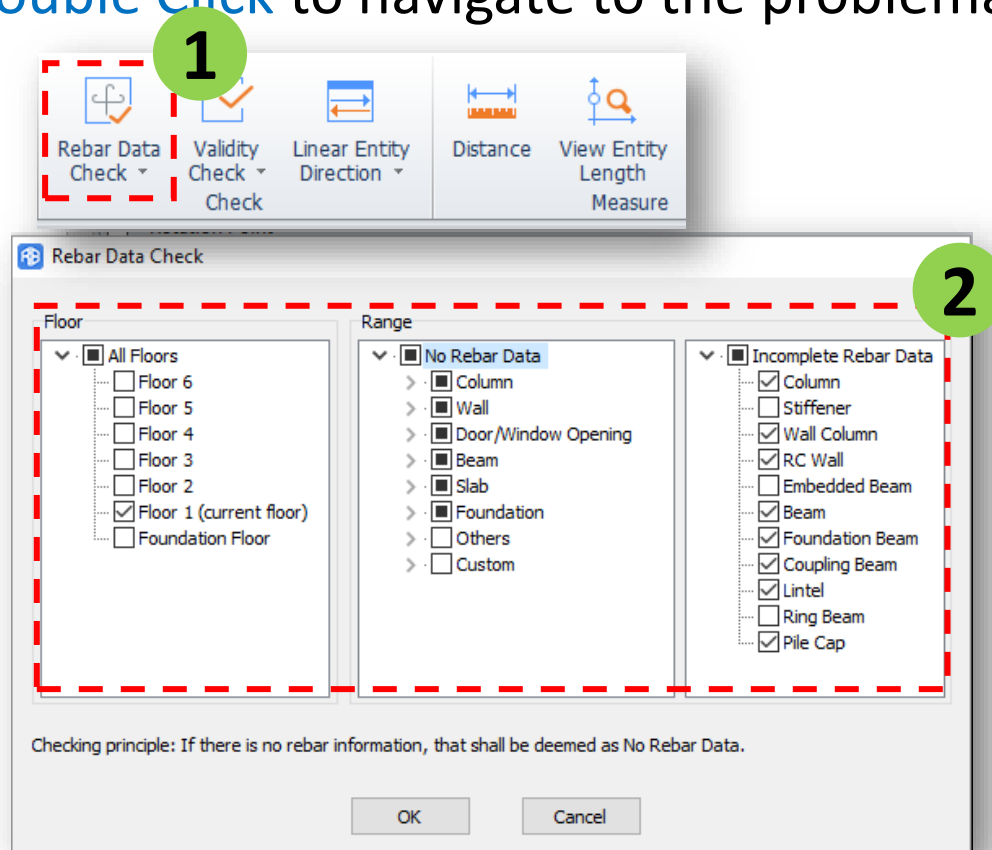
Btm/side/top cover

Select no if the slab rebars (top/bottom) continuously go through the pile cap

Black – private attribute
(apply only to selected element)



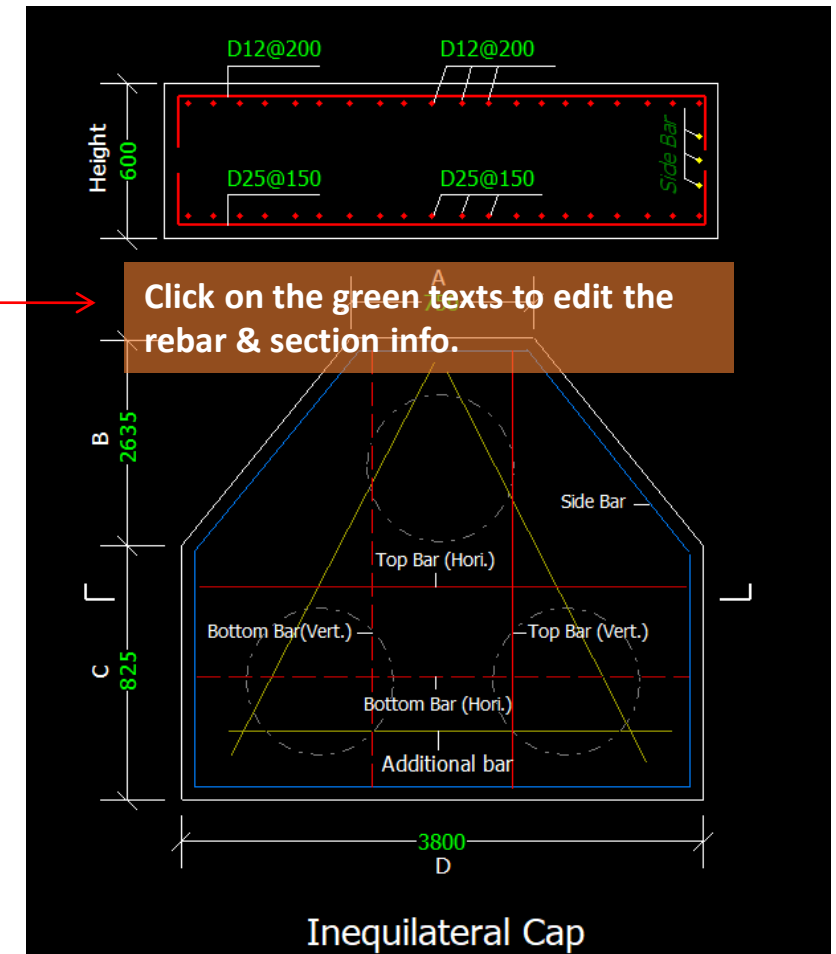
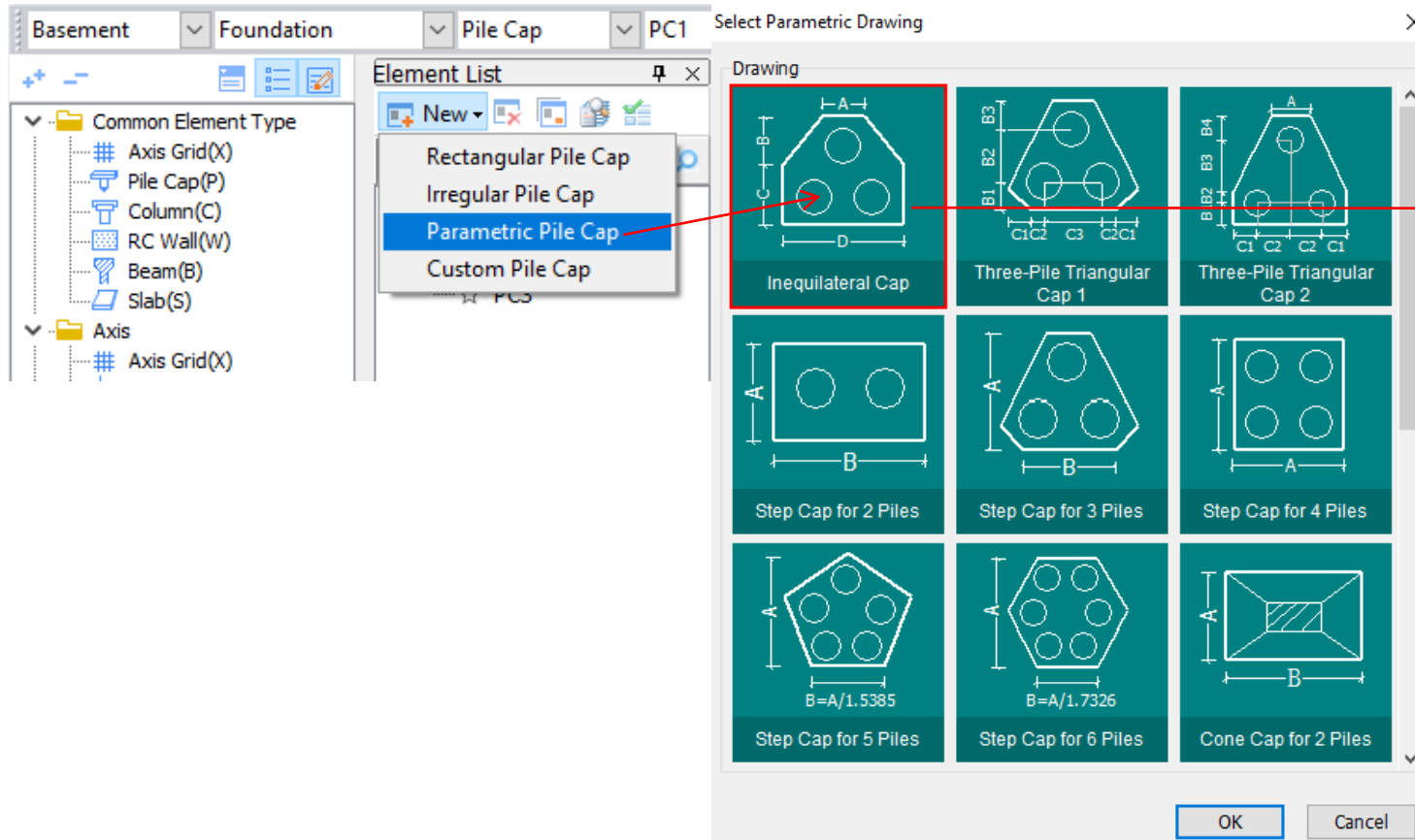
- Step 1: Tab {Tool}, Click [Rebar Data Check]
- Step 2: Select Range & Element
- Step 3: Double Click to navigate to the problematic entity(ies)



Step 1: In the pile cap element list click new → parametric pile cap

Step 1: Pick the shape that matches the pile cap we want to model

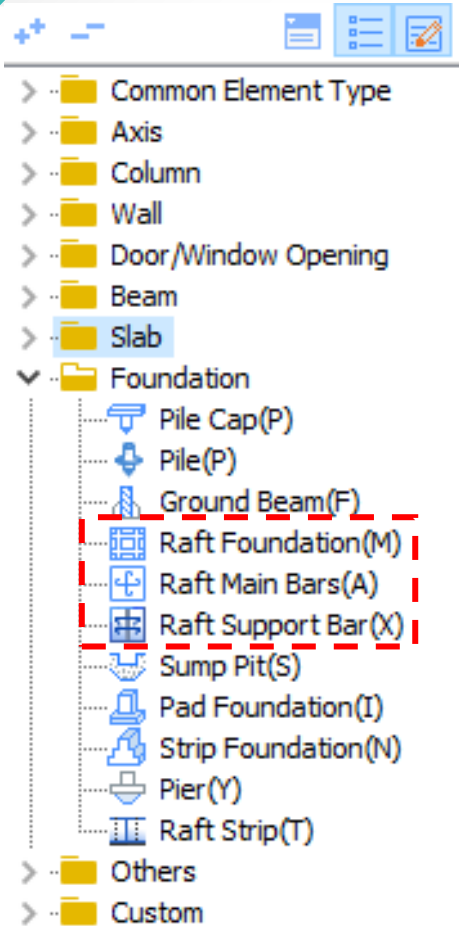
Step 1: Input the rebar & shape info in the attribute editor

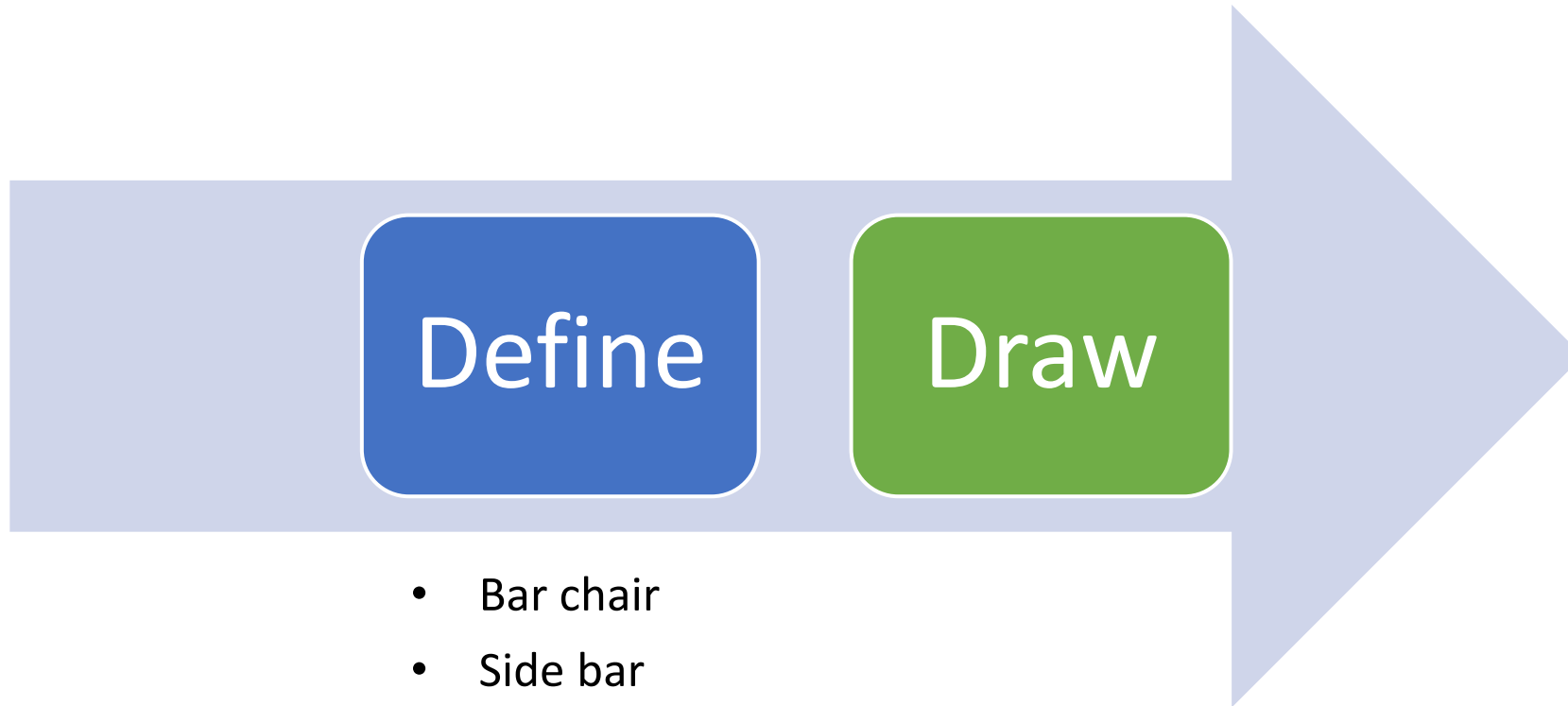


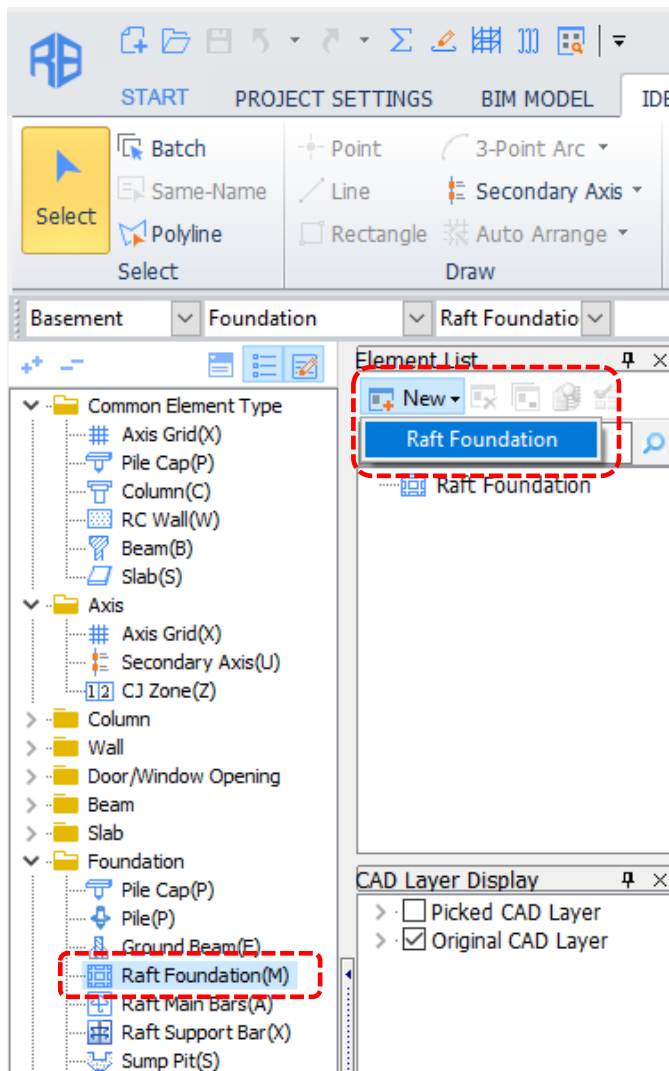
Area Type



Raft Foundation



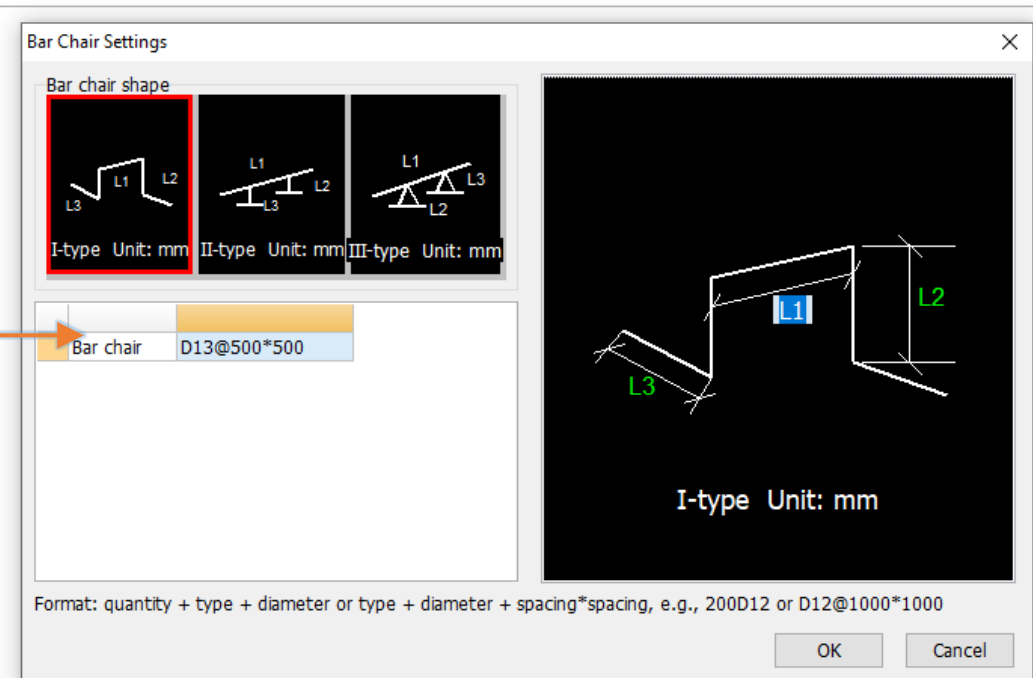


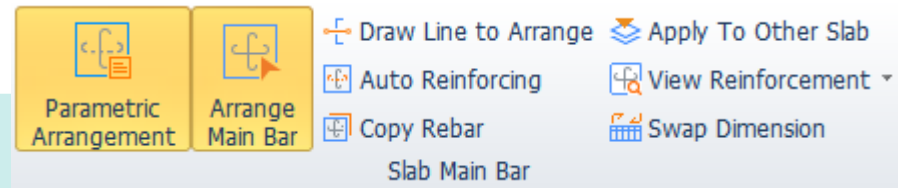


Edit Attribute

	Attribute Name	Attribute Value	Add
1	Name	RF-1	☐
2	Concrete Grade	(30.0)	☐
3	Rebar Content(kg/m3)		☐
4	Rebar Info.		☐
5	Thickness(mm)	2500	☐
6	Elevation Positioning	Top Elevation	☐
7	Top Elevation(m)	Floor_Bottom_Elevation	☐
8	Bottom Elevation(m)	Floor_Bottom_Elevation-2.5	☐
9	Slab Number		☐
10	Cover Thickness(mm)	(40)	☐
11	Bar Chair Parametric		☐
12	Bar Chair Information		☐
13	Linear Bar Chair Direction	Parallel Horizontal Main Bar	☐
14	Hooks		☐
15	Calculation Method For	Round Up +1	☐
16	Calculation Method For	Round Up +1	☐
17	Raft Side Main Bar		☐
18	Other Rebars		☐
19	Calculation Rule	Calculate by default setting	☐
20	Tension/Compression	Calculate by default setting	☐
21	Rebar Strength Setting	Calculate by default setting	☐
22	Category Name	(RF-1)	☐
23	Summary Info	Raft Foundation	☐
24	Remarks		☐
25	Construction Information		☐
36	Display pattern		☐

From TASC





Parametric Arrangement

Draw Line to Arrangement

Arrangement Main Bar

1 Click Raft Main Bars

2 In draw function, click Parametric Arrangement

3 Select The raft type

4 Select the rebar arrangement type

5 key in the rebars

6 Click Generate

The screenshot displays the CUBICOST TRB C-III software interface. The main window shows a 'Slab Reinforcements Layout Plan' with a grid of rebar. The rebar is labeled with 'D10@250', 'D10@300', 'D10@350', 'D10@400', 'D10@450', and 'D10@500'. The layout plan includes dimensions for 'Clear span length of longer span (Ln)' and 'Clear span length of shorter span (Sn)'. A note at the bottom states: 'Note: Rebar arrangement of this type can only be generated in rectangular slabs.' The 'Parametric Arrangement' dialog is open, showing a table of slab names and types. The table has columns 'Slab Name', 'Type', and 'Gen'. The rows are S-1, S-2, S-3, S-4, and S-5. S-1 is selected. The 'Parametric Arrangement' dialog also shows a preview of the rebar layout. The software interface includes a menu bar with 'START', 'PROJECT SETTINGS', 'BIM MODEL', 'IDENTIFY', 'DRAW', 'VIEW', 'TOOL', and 'QUANTITY'. The 'DRAW' menu is open, showing options like 'Batch', 'Polyline', 'Extend', 'Break', 'Align', 'Copy Element', 'Find Entity', 'Copy Entity', 'Lock', 'Common Attribute', 'Others', 'Parametric Arrangement', 'Arrange Main Bar', 'Copy Rebar', and 'Swap Dimension'. The 'Parametric Arrangement' dialog has a 'New' button, a 'Delete' button, and a 'Copy' button. The 'Parametric Arrangement' dialog also has a 'Generate' button. The software interface also includes a status bar at the bottom with information like 'X=410 Y=11534', 'Floor height: 3m', 'Bottom Elevation: 0m', 'Hide:0', and '239.9 FPS'.

Slab Name	Type	Gen
S-1		
S-2		
S-3		
S-4		
S-5		

Slab Reinforcements Layout Plan

Clear span length of longer span (Ln)

Clear span length of shorter span (Sn)

Note: Rebar arrangement of this type can only be generated in rectangular slabs.

Generate: Rebar and Rebar Content

Modeling Single Element BQ Report

X=410 Y=11534 Floor height: 3m Bottom Elevation: 0m Hide:0 Cross-Element Select Specify The First Corner Point

239.9 FPS

Basement ▾ **Foundation**

- Common Element Type
 - Axis Grid(X)
 - Pile Cap(P)
 - Column(C)
 - RC Wall(W)
 - Beam(B)
 - Slab(S)
- Axis
 - Axis Grid(X)
 - Secondary Axis(U)
 - CJ Zone(Z)
- Column
- Wall
- Door/Window Opening
- Beam
- Slab
- Foundation
 - Pile Cap(P)
 - Pile(P)
 - Ground Beam(F)
 - Raft Foundation**
 - Raft Main Bars(A)**
 - Raft Support Bar(X)
 - Sump Pit(S)
 - Pad Foundation(I)
 - Strip Foundation(N)
 - Pier(Y)
 - Raft Strip(T)
- Others
- Custom

SETTINGS BIM MODEL IDENTIFY **DRAW** VIEW TOOL QUANTITY

Point 3-Point Arc ▾ Delete ▾ Extend ▾ Break ▾ Align ▾ Copy Element ▾ Find Entity ▾ Parametric Arrangement ▾ Draw Line to Arrange ▾ To Other Slab

Line Secondary Axis ▾ Copy ▾ Trim ▾ Merge ▾ Split ▾ Copy Entity ▾ Lock ▾ Auto Reinforcing ▾ View Reinforcement ▾

Rectangle Auto Arrange ▾ Move ▾ Rotate ▾ Mirror ▾ Others ▾ Set Common Attribute ▾ Others ▾ Copy Rebar ▾ Swap Dimension

Draw Edit Entity Element & Entity Raft Main Bars

▾ Raft Main Bars ▾ RMBBar-11 ▾ Single ▾ Continuous ▾ Custom ▾ By Main Bar Range ▾ XY ▾ Hori. ▾ Vert. ▾ 2-Point ▾ Parallel ▾ Radial Bar by Arc ▾ Radial Bar by Circle Center

Element List

Searching element...

- Raft Main Bars
 - RMBBar-1
 - RMBBar-2
 - RMBBar-3
 - RMBBar-4
 - RMBBar-5
 - RMBBar-6
 - RMBBar-7
 - RMBBar-8
 - RMBBar-9
 - RMBBar-11**

Drawing Manager

Drawing File List

	Name	Scale
1	basement	1:1
2	RAFT &	1:1
3	RAFT	1:1
4	RAFT	1:1
5	200208	1:1

CAD Layer Display

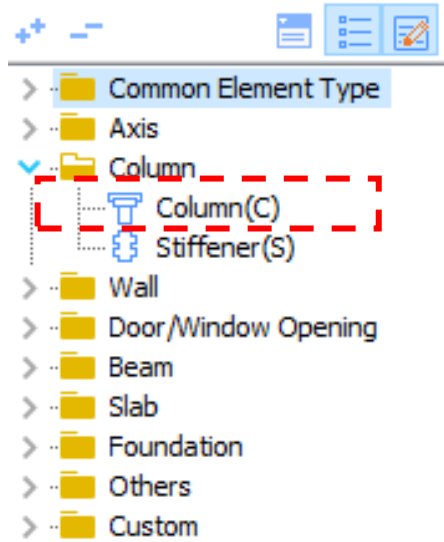
- Original CAD Layer
 - ST-TX1
 - ST-TB
 - 5
 - GRID
 - ST-AS1
 - AR-DIM
 - ST-KL1
 - WALL
 - ST-AR1
 - ST-BTN
 - 3
 - SHEARWALL
 - ARSIR
 - VOID
 - KOP

Single Element BQ Report

Height: 3.4m Bottom Elevation: -3.4m 0 Hide:7

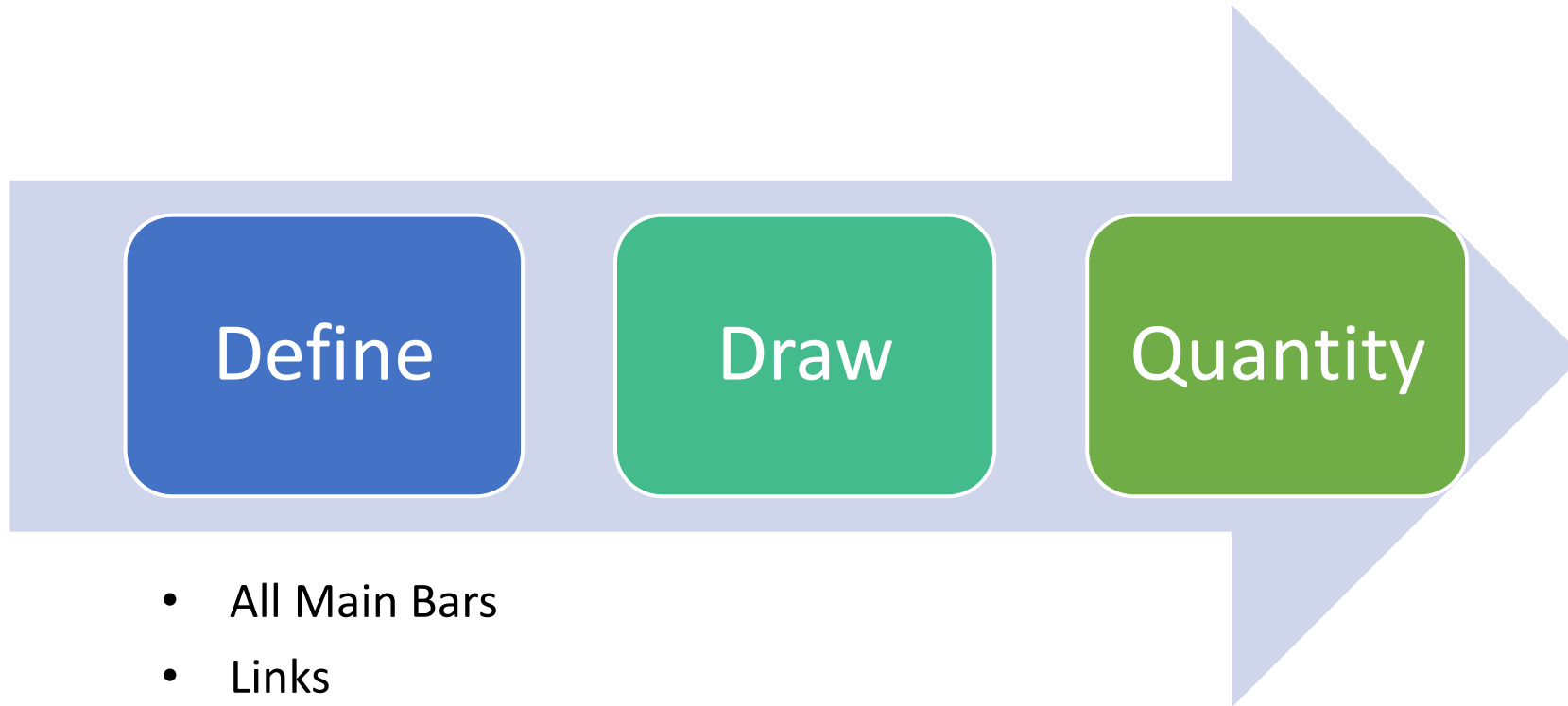
Cross-Element Select Specify The First End Point Of The Range Line, Right Click To Cancel

Point Type

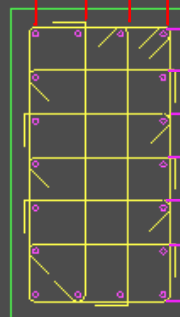


Column





- All Main Bars
- Links
- Legs

LANTAI	MUTU BETON f'c (MPa)	TIPE KOLOM TULANGAN	K11	
LT. 1 SFL.+15.350  LT. P3 SFL.+11.400	45	DIMENSI	400/700	
		TULANGAN	18 D22	
		SENGKANG	D13-100	
		T I E S	V 2 D16-100	
			H 5 D16-100	

4 nos of vert bar

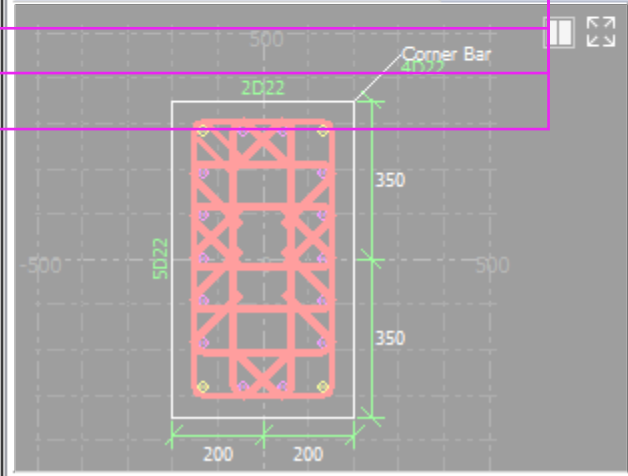
Attribute Editor

	Attribute Name	Attribute Value	Add
1	Name	K11	
2	Category	Frame Column	
3	Material	In-Situ	
4	Section Width(B)	400	
5	Section Height(H)	700	
6	All Main Bars	18D22	
7	Links	D13@100+D16@100	
8	Links In Joint	Calculate by link	
9	Legs	4*7	
10	Column Type	(Middle column)	
11	Other Links		
12	Other Rebars		

Corner Bar Side Bar Special Methods Align

Rebar info.

2D16



(X: 619 Y: 76)

V

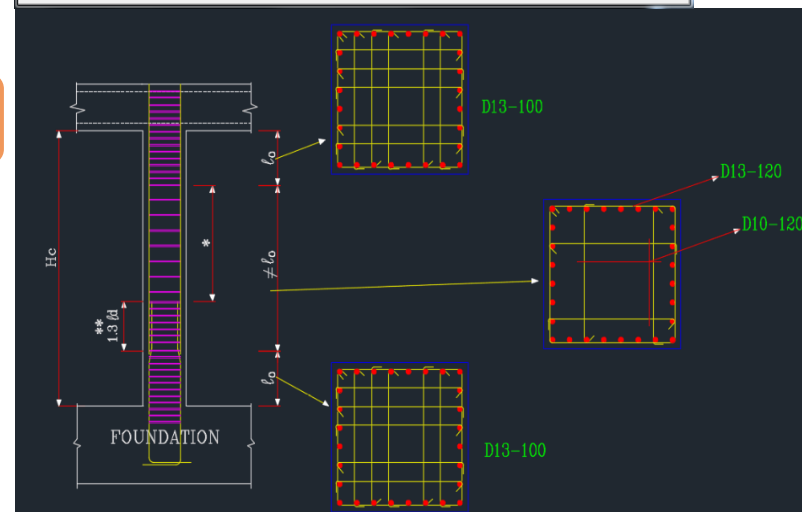
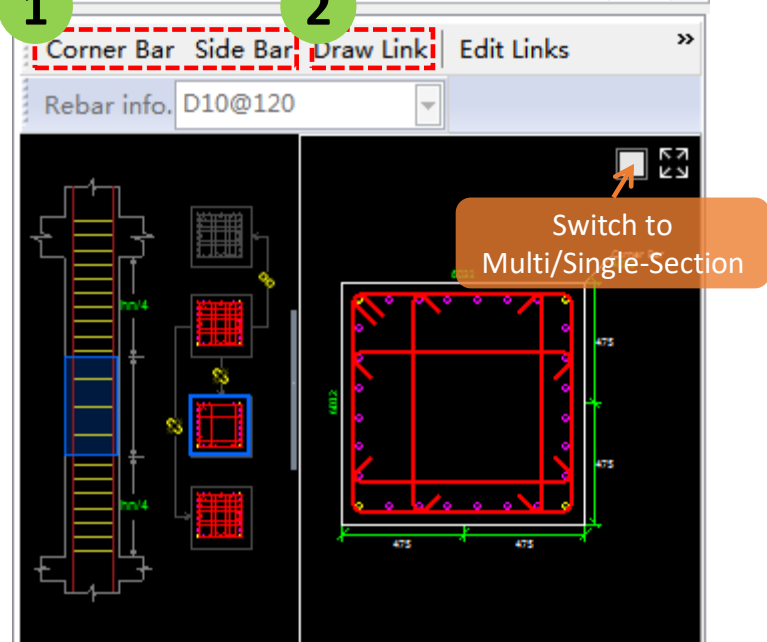
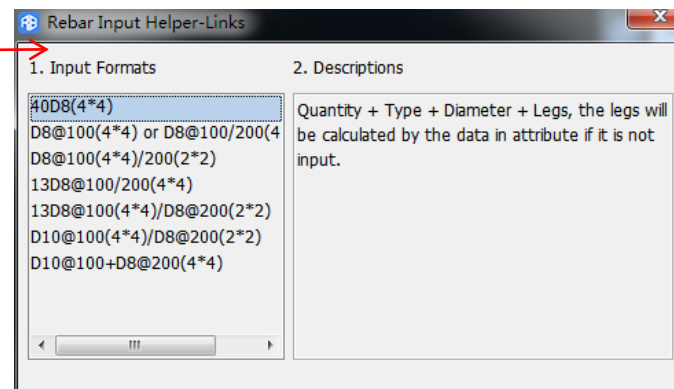
H

7 nos of vert bar

	Attribute Name	Attribute Value	Add
1	Name	Col-1	
2	Category	Frame Column	
3	Material	In-Situ	
4	Section Width(B)	950	
5	Section Height(H)	950	
6	All Main Bars	28D32	...
7	Links	By Section	
8	Links In Joint	Calculate by link	
9	Legs	By Section	
10	Column Type	(Middle column)	
	Other Links		

Input main bars and links (sengkang) in attribute editor

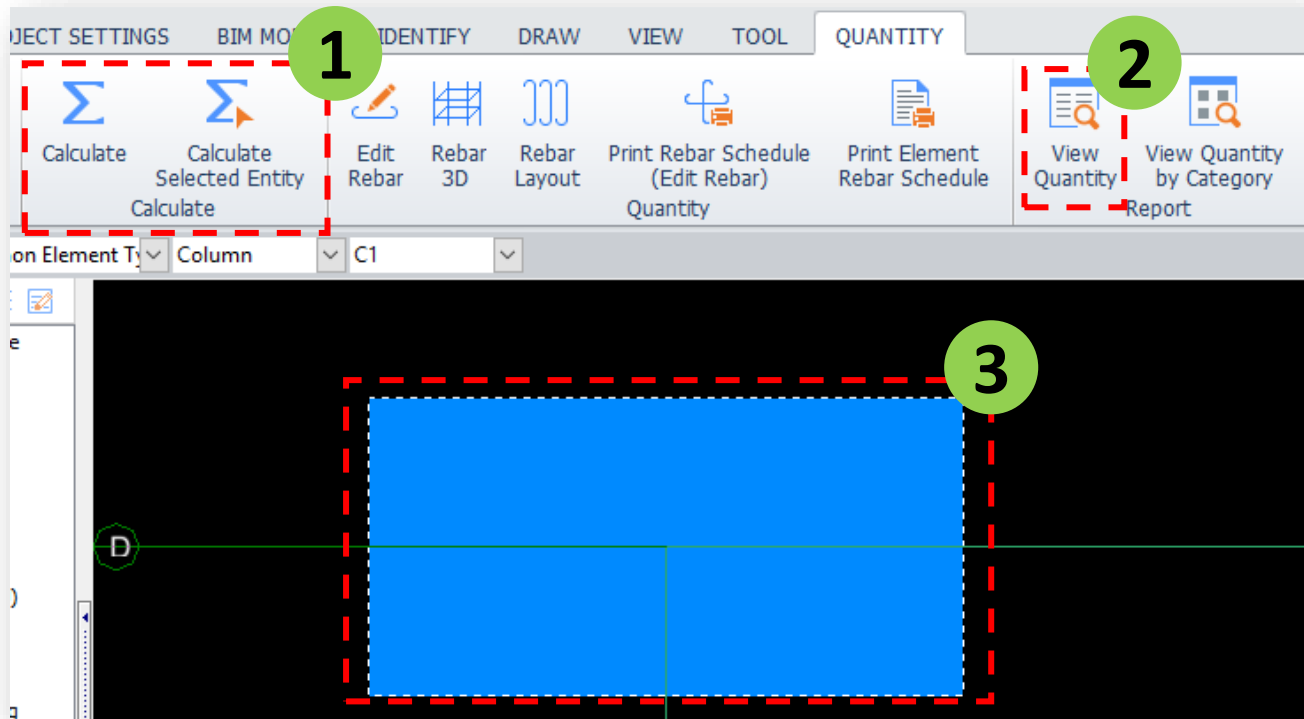
Tips: Click (...) button in attribute value to check the available input formulas Main Bars



we can arrange, edit, or draw rebars in section

- **Step 1:** For main bar, click [Corner bar] or [Side Bar], fill in Rebar info
- **Step 2:** For link, click [Draw Link] & fill in Rebar info

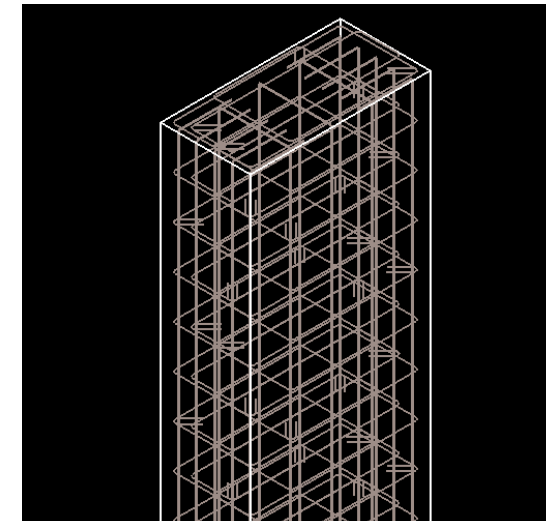
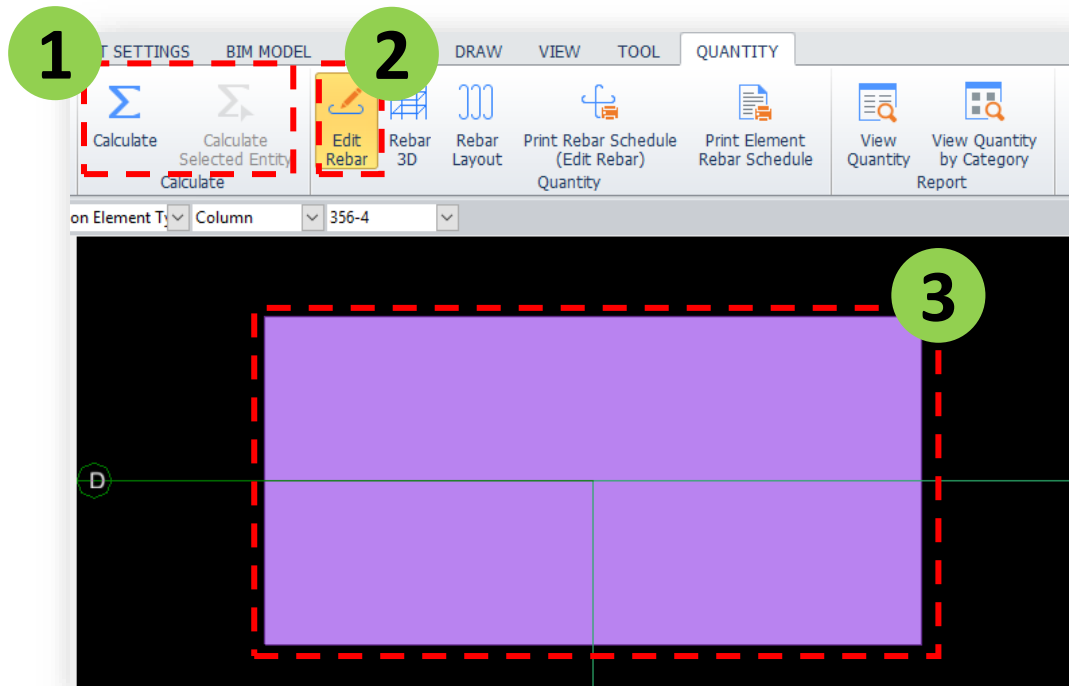
- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Click [View Quantity]
- Step 3: Select column(s)
- Step 4: Check column quantity * Apply to all



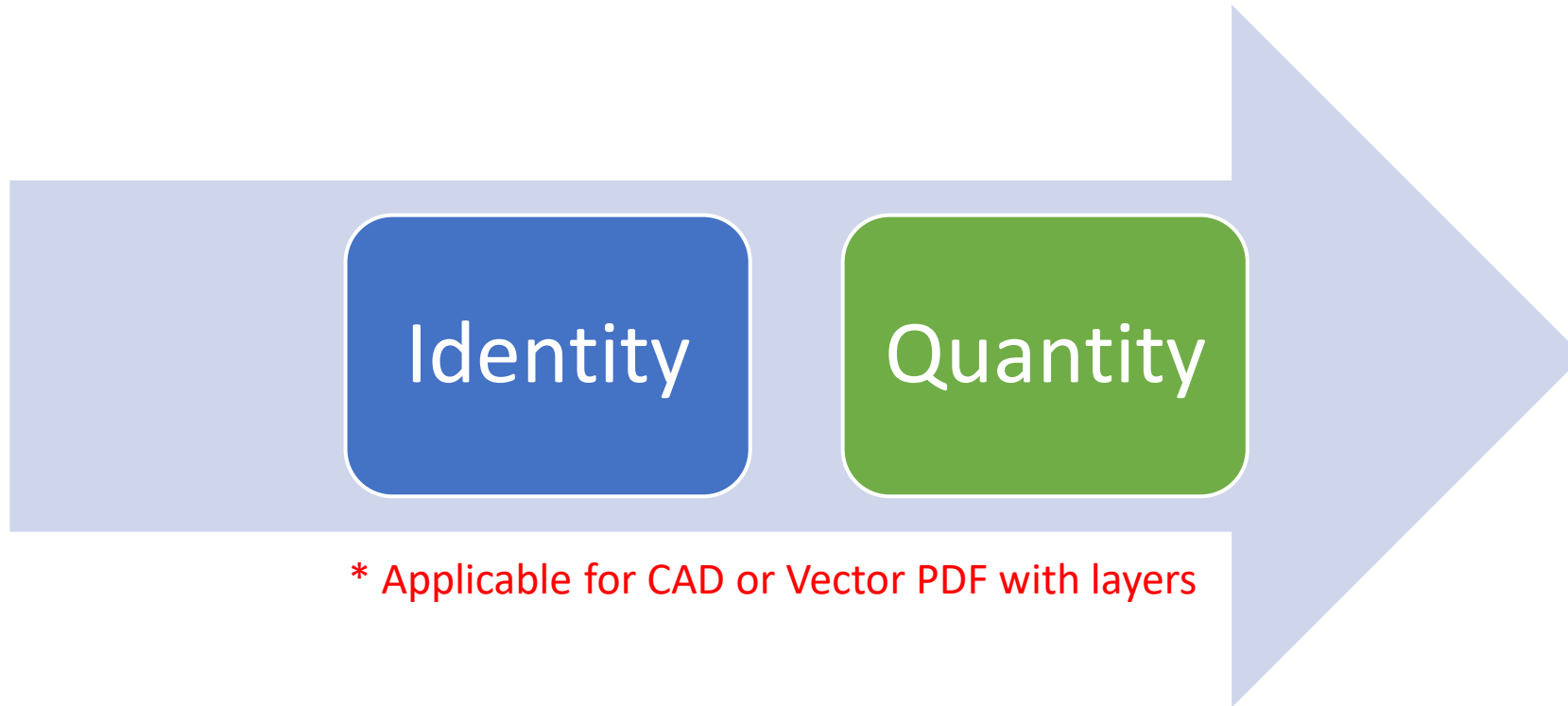
Rebar Gross Weight (kg): 168.423

	Element Name	Rebar Gross Weight (kg)	BJTD-40		
			10	22	Total
1	Col-1[1]	168.423	14.393	154.03	168.423
2	Total	168.423	14.393	154.03	168.423

- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Click [Edit Rebar]
- Step 3: Select column
- Step 4: Check column quantity * Apply to all



	Rebar	Strength	Diamete	Shape	Shape	Calculation Formula	Formula Description	Cutting-	Quantit	Total	Reba	
1*	1	BJTD-40	22	639	2960	3000-40+12*22	Column Height-Cover+Bend at column top	3224	12	115.522	Main bar	Construction Zone
2	2	BJTD-40	10	195	320	2*(720+320)+17.8*d		2258	16	22.291	Link	Default Construction Zone
3	3	BJTD-40	10	485	320	320+17.8*d		498	78	23.967	Hook	Default Construction Zone

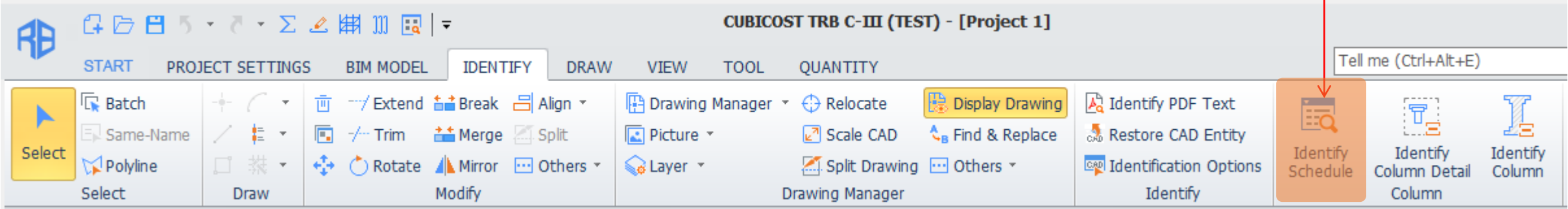
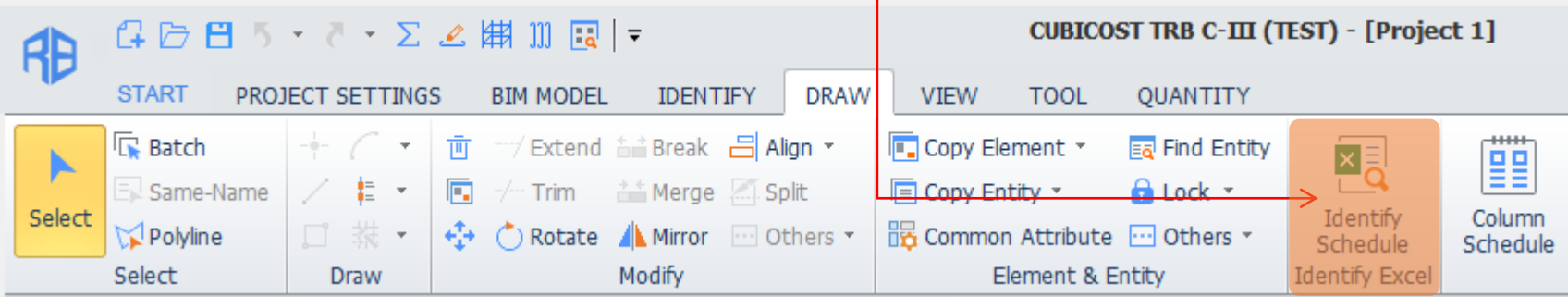


* Applicable for CAD or Vector PDF with layers

Identify Column Schedule

Excel

CAD or Vector PDF



1

Prepare Schedule in Excel

	A	B	C	D	E	F
4	NAME	B	H	ALL MAIN BAR	LINKS	LEGS
5	K1	700	1500	36D22	D13-100	4*6
6	K2	700	1500	56D22	D13-100	4*6
7	K2A	700	1500	48D22	D13-100	4*6
8	K3	650	650	20D25	D13-100	5*5
9	K1	800	1500	56d32	D16-100+D13-100	5*8
10	K2	800	1500	66D32	D16-100+D13-100	5*8
11	K2A	800	1500	60D32	D16-100+D13-100	5*8

DRAW

VIEW

TOOL

QUANTITY

2

Identify column schedule, Import Excel

Identify Schedule from ExcelD:\FlorentiaE\training drawings\new drawings\edited drawing Ega\...

Import Excel | Sheet: Sheet1 | Unit in Drawing: mm

1	Name	B	H	All Main Bars	Links	Legs	Category
2	NAME	B	H	ALL MAIN	LINKS	LEGS	Frame
3	K1	700	1500	36D22	D13-100	4*6	Frame
4	K2	700	1500	56D22	D13-100	4*6	Frame
5	K2A	700	1500	48D22	D13-100	4*6	Frame
6	K3	650	650	20D25	D13-100	5*5	Frame
7	K1	800	1500	56d32	D16-100+D13-100	5*8	Frame
8	K2	800	1500	66D32	D16-100+D13-100	5*8	Frame
9	K2A	800	1500	60D32	D16-100+D13-100	5*8	Frame
10							Frame
11							Frame

3

Set the heading (yellow highlight) to match excel's heading

Identify Schedule from ExcelD:\FlorentiaE\training drawings\new drawings\edited drawing Ega\... Excel for trainer\Training Drawing_COLUM...

Import Excel | Sheet: Sheet1 | Unit in Drawing: mm

1	Name	B	H	All Main Bars	Links	Legs	Category	Floor
2	NAME	B	H	ALL MAIN	LINKS	LEGS	Frame	Zone
3	K1	700	1500	36D22	D13-100	4*6	Frame	Zone
4	K2	700	1500	56D22	D13-100	4*6	Frame	Zone
5	K2A	700	1500	48D22	D13-100	4*6	Frame	Zone

4

Right click on the excel heading text (2nd row), click Delete, delete row

Identify Schedule from ExcelD:\FlorentiaE\training drawings\new drawings\edited drawing Ega\excel for trainer\

Import Excel | Sheet: Sheet1 | Unit in Drawing: mm

	Name	B	H	All Main Bars	Links	Legs	Category	Floor
1								
2	K1	700	1500	36D22	D13-100	4*6	Frame	[GF]
3	K2	700	1500	56D22	D13-100	4*6	Frame	Zone-1[GF]
4	K2A	700	1500	48D22	D13-100	4*6	Frame	Zone-1[GF]
5	K3	650	650	20D25	D13-100	5*5	Frame	Zone-1[-1]
6	K1	800	1500	56d32	D16-100+D	5*8	Frame	Zone-1[-1]
7	K2	800	1500	66D32	D16-100+D	5*8	Frame	Zone-1[-1]
8	K2A	800	1500	60D32	D16-100+D	5*8	Frame	Zone-1[-1]

Select Floor

Target Floor

- ☒ All Floors
 - ☒ Zone-1
 - ☐ Floor 2
 - ☐ Floor 1
 - ☒ Ground Floor
 - ☐ Basement
 - ☐ Foundation Floor

OK Cancel

Click on (...) button at floor cell, select the floor for each column, then click OK

5

Identify Schedule

Import Excel | Sheet: Sheet1 | Unit in Drawing: mm

8	K2A	800	1500	60D32	D16-100+D	5*8	Frame	Zone-1[-1]
9							Frame	Zone-1[-1]
10							Frame	Zone-1[-1]
11							Frame	Zone-1[-1]
12							Frame	Zone-1[-1]
13							Frame	Zone-1[-1]
14							Frame	Zone-1[-1]
15							Frame	Zone-1[-1]
16							Frame	Zone-1[-1]
17							Frame	Zone-1[-1]
18							Frame	Zone-1[-1]
19							Frame	Zone-1[-1]
20							Frame	Zone-1[-1]
21							Frame	Zone-1[-1]
22							Frame	Zone-1[-1]

Prompt: Click the first cell of each column to select corresponding relation from the drop-down list.

Insert Delete Copy Merge Find & Replace Generate in Column Schedule Generate in Element Close

Delete Row Delete Column

Block ALL empty rows and delete rows

6

Click generate in Column Schedule

7

Define Column Schedule

Column list:

	Column No./Floor Code	Category	B*H (Diameter D)	All Main Bars	Dowel Bar Info	Links	Legs	Length of Densified Zone	Links in Joint Area	Other Links	Summary Info	Remarks	Generate Element
1	- K1	Frame Column	700*1500				2*2		Calculate by link				☒
2	Zone-1[GF]	Frame Column	700*1500	36D22		D13@100	4*6		(Calculate by link)				☒
3	Zone-1[-1]	Frame Column	800*1500	56D32		D16@100+D13@100	5*8		(Calculate by link)				☒
4	- K2	Frame Column	700*1500				2*2		Calculate by link				☒
5	Zone-1[GF]	Frame Column	700*1500	56D22		D13@100	4*6		(Calculate by link)				☒
6	Zone-1[-1]	Frame Column	800*1500	66D32		D16@100+D13@100	5*8		(Calculate by link)				☒
7	- K2A	Frame Column	700*1500				2*2		Calculate by link				☒
8	Zone-1[GF]	Frame Column	700*1500	48D22		D13@100	4*6		(Calculate by link)				☒
9	Zone-1[-1]	Frame Column	800*1500	60D32		D16@100+D13@100	5*8		(Calculate by link)				☒
10	- K3	Frame Column	650*650				2*2		Calculate by link				☒
11	Zone-1[-1]	Frame Column	650*650	20D25		D13@100	3*3		(Calculate by link)				☒

Generate from Element New Column New Floor Delete Copy Sort Generate Element Sync to Entity Page Settings

8

Check the column info, if confirmed, click sync to entity

Sync to Entity

Select Items

- ☒ Select All
- ☐ Category
- ☒ B*H
- ☒ Edit Section
- ☒ All Main Bars
- ☒ Dowel Bar Info
- ☒ Links
- ☒ Legs
- ☒ Length of Densified Zone
- ☒ Links in Joint Area
- ☒ Other Links
- ☐ Summary Info
- ☐ Remarks

Syncing Principle:

Sync the attributes of the elements on the floors checked for "Generate Element" in Element Schedule to the corresponding elements and entities.

OK Cancel

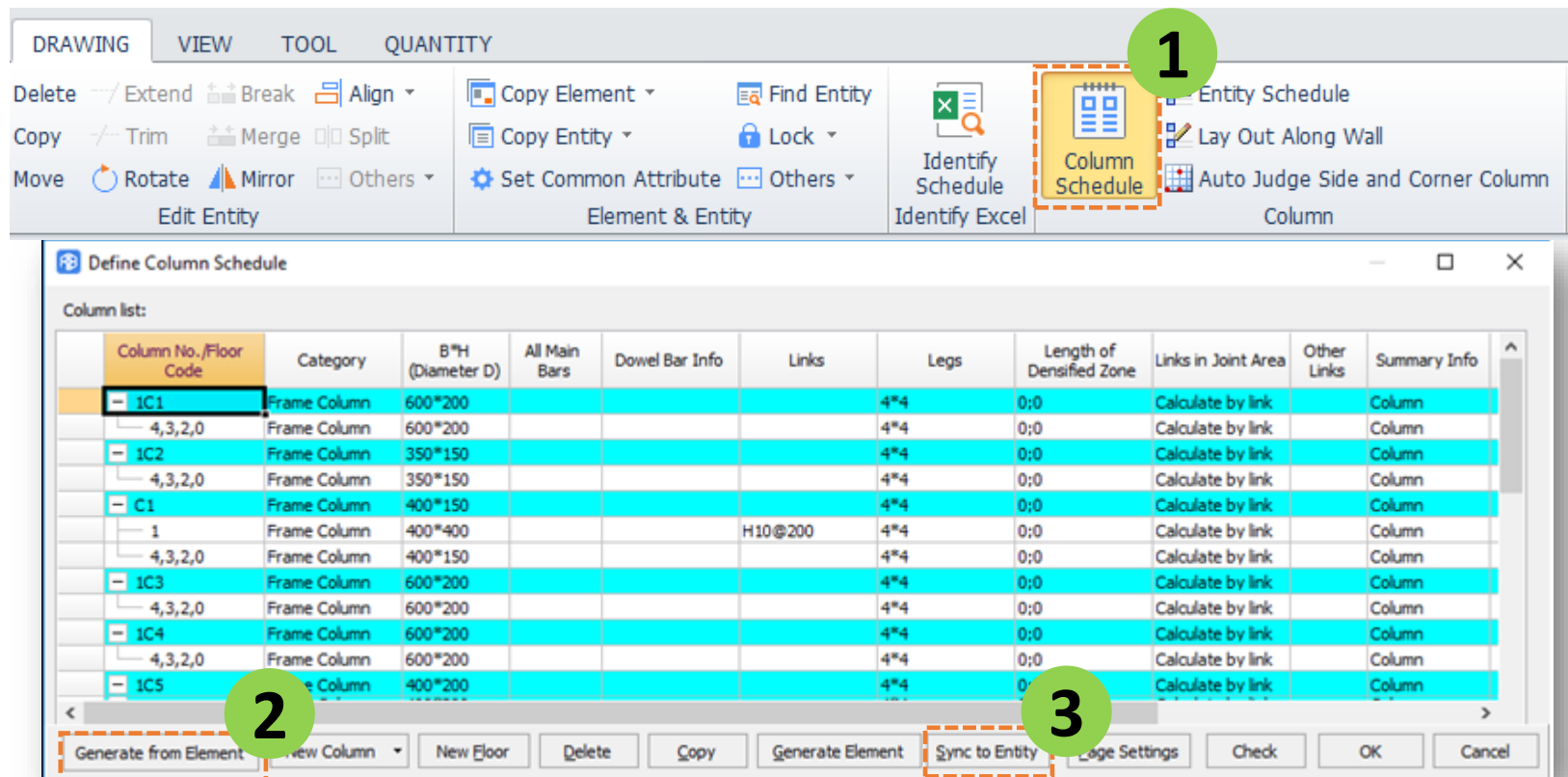
Additional information:

✓ You can input the rebars in column schedule as well.

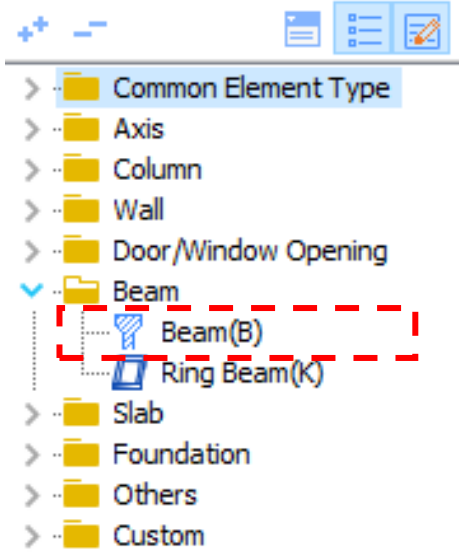
From column schedule, make **new column** → input the column info → **generate element** → **draw** (point) the column in the model.

✓ If the elements already modelled, click "**generate from element**" so the entity info is imported to the schedule → key in the rebars information → "**sync to entity**"

- Step 1: Tab {Draw}, Click [Column Schedule]
- Step 2: Click [Generate from Element] to generate all the defined column info
- Step 3: Modify (if any) and [Sync to Entity]

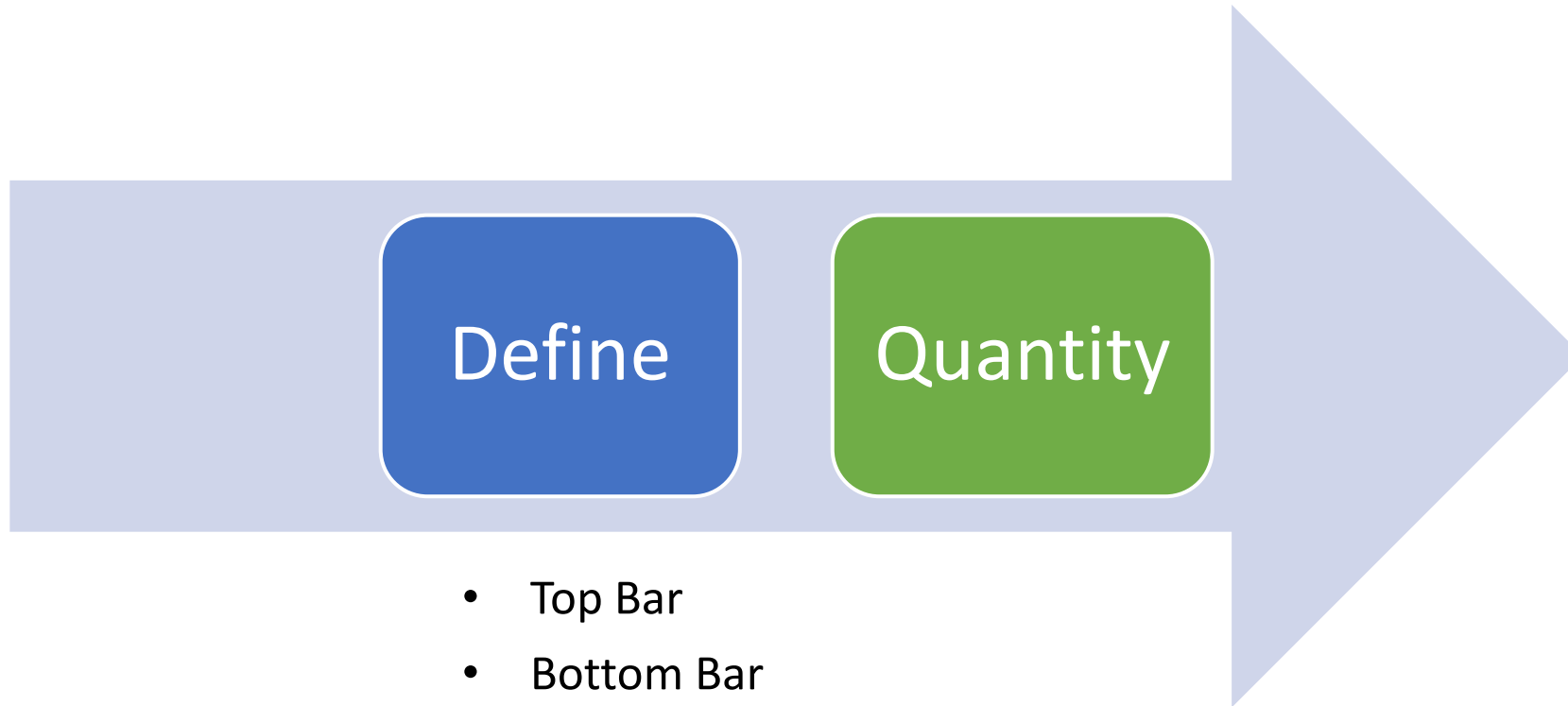


Linear Type

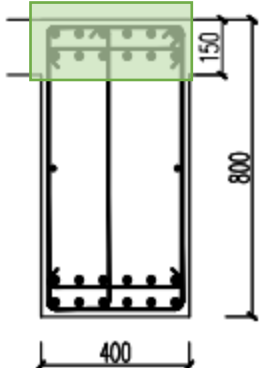


Beam





- Top Bar
- Bottom Bar
- Side Bar
- Link

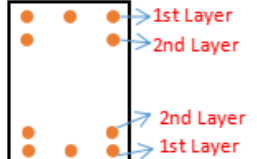
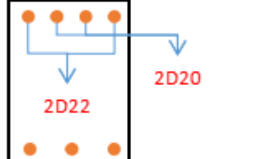
TYPE BALOK	400 x 800 B3C1
LETAK POTONGAN	
POTONGAN	
UKURAN	400 x 800
TULANGAN ATAS	12 D 22
TULANGAN BAWAH	12 D 22
SENGKANG	1.5D13 - 100
TUL. PEMINGGANG	2 D 13

Edit Attribute			
	Attribute Name	Attribute Value	Add
1	Name	B3C1	
2	Category	Floor Frame Beam	☐
3	Material	In-Situ	☐
4	Section Width(mm)	400	☐
5	Section Height(mm)	800	☐
6	Axis from Left Side(mm)	(200)	☐
7	Span Quantity		☐
8	Links	D13@100(3)	☐
9	Legs	3	☐
10	Top Continuous Bar	6D22/6D22	☐
11	Bottom Continuous Bar	6D22/6D22	☐
12	Side Main Bar (B.F)	2D13	☐
13	Hooks		☐

Define here
or
in [Side Label]

Important Tips of Beam

1) Different between '+' & '/'

Beam Cut Section with "/"		Beam Cut Section with "+"	
Eg.: 3D22/2D22		Eg.: 2D22+2D20	
3D22/2D22		2D22	

Rebar Input Helper-Top Continuous Bar	
1. Input Formats	2. Descriptions
4D20 or 2D20+2D18	"/" is used to separate bars of different layers, from top to bottom, when there are multiple layers of rebars.
2D20/2D18 or 4D20 2/2	
1-2D20	

2) Side bar : if the side bar information is given only 1 side of side bar, remember to key in total nos of side bar. Eg.: 2D13

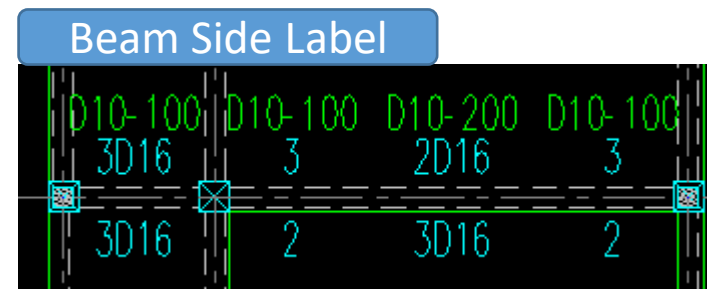
- Step 1: Tab {Draw}, Click [Side Label]
- Step 2: Select Beam
- Step 3: Input Rebar Info

Beam Section B7 (400x700)

	TUMPUAN	LAPANGAN	TUMPUAN
Top Bar	8D19	4D19	12D19
Bottom Bar	4D19	8D19	6D19
Width	400	400	400
Height	700	700	700
Stirrups	SENGKANG 2D10-100	SENGKANG 2D10-200	SENGKANG 2D10-100

Beam	Element	Top Bar			Bottom Bar			Side Bar	Link	Left Densified	Right Densified	Legs	Densified Length	Other Links
	Width*	Left	Middle	Right	Left	Middle	Right	Side Bar (B.F)						
1	B7	(400*700	6D19/2D19	4D19	6D19/6D19	4D19	2D19/6D19	6D19	2D10	D10@100/20	(D10@100)	(D10@100)	4	Ln/4

- Step 1: Tab {Draw}, Click [Side Label]
- Step 2: Select Beam
- Step 3: Input Rebar Info



1

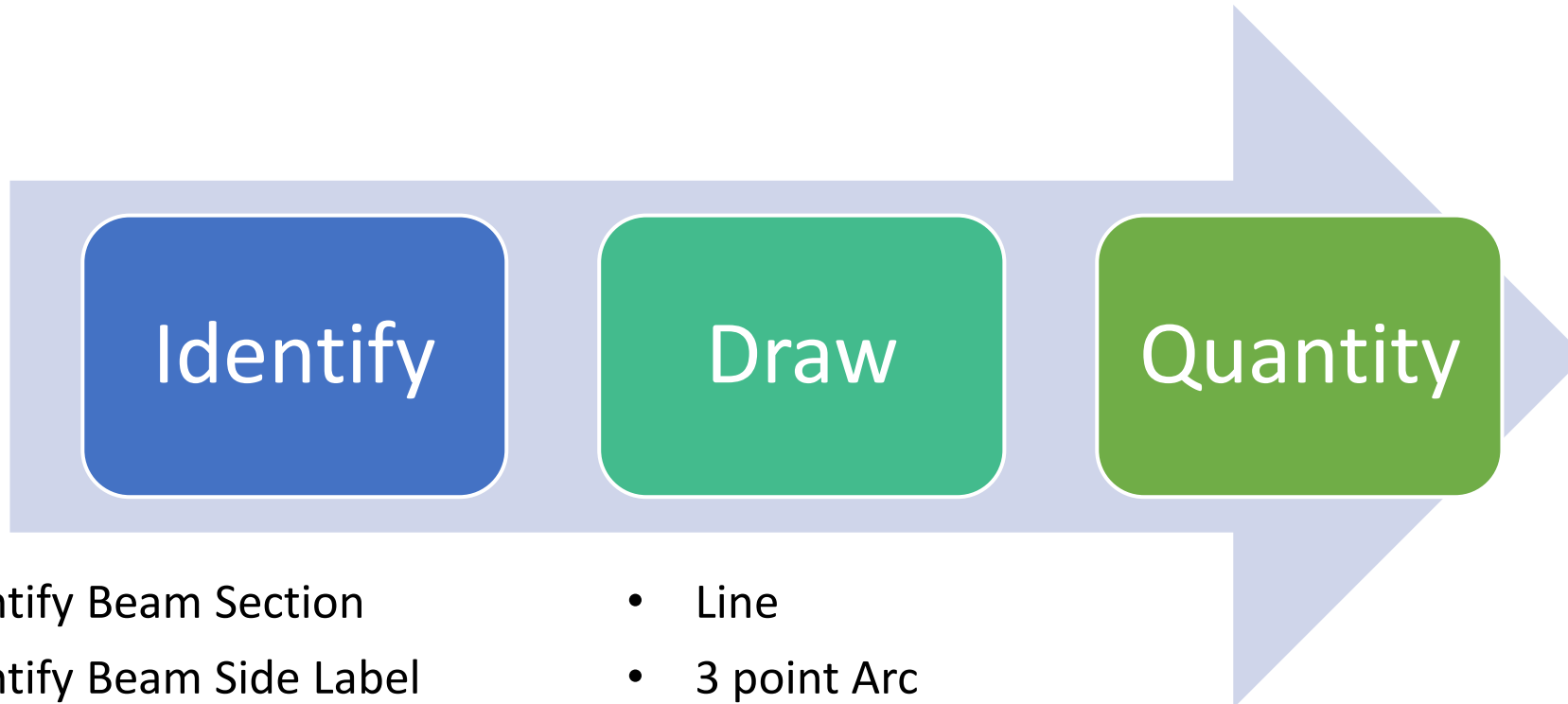
2

3

Beam Markin	Element	Width*	Top Bar			Bottom Bar			Side Bar	Link	Left Densified	Right Densified	Left Densified Length	Other Links
			Left	Middle	Right	Left	Middle	Right	Side Bar (B.F)					
1	B7	(250*700)		3D16			3D16			D10@100			3	Ln/4
2	B7	(250*700)	3D20	2D16	3D20	2D20	3D16	2D20		D10@100/20	(D10@100)	(D10@100)	3	Ln/4

- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Click [Rebar Layout]
- Step 3: Select Beam
- Step 4: Check Rebar Arrangement * Apply to all

Rebar	Strength	Diameter	Shape	Shape	Calculation Formula	Formula Description	Cutting- G
1*	1	BJTD-40	19	629	350 4177 350	4177+350+350	4877 2



- Identify Beam Section
- Identify Beam Side Label
- Identify CAD/Excel Schedule
- Line
- 3 point Arc
- * F4 to change alignment

CUBICOST TRB C-II (TEST) - [Project 1]

START PROJECT SETTINGS BIM MODEL IDENTIFY DRAW VIEW TOOL QUANTITY

Select Batch Same-Name Polyline Select Point Line Rectangle Draw 3-Point Arc Secondary Axis Auto Arrange Draw Delete Extend Break Align Copy Trim Merge Split Move Rotate Mirror Others Edit Drawing Manager Relocate Scale CAD Split Drawing Drawing Manager Identify PDF Text Restore CAD Entity Identification Options Identify Identify Schedule Identify Beam Rebar Beam Identify Beam

Ground Floor Common Element Beam Unnamed beam Layer 1

Drawing Manager

Drawing File List

	Name	Scale
1	LANTAI 1	1:1
2	SR-04 DET	1:1

CAD Layer Display

Picked CAD Layer

- ☒ Original CAD Layer
 - ☒ baut
 - ☒ D
 - ☒ GEDUNG
 - ☒ GONDOLA
 - ☒ PLAT
 - ☒ Roof\$0\$GOND
 - ☒ 0
 - ☒ Roof\$0\$GOND
 - ☒ HID
 - ☒ LIFT
 - ☒ TEXT-1
 - ☒ BESI
 - ☒ TBL1
 - ☒ POND
 - ☒ GON
 - ☒ LV
 - ☒ KL
 - ☒ KL1
 - ☒ ADC

LANTAI 1

ST 212

18.9 FPS

X=69502 Y=136201 Floor height: 3m Bottom Elevation: 0m Specify The First Corner Point, Or Pick Element Entity

- Step 1: Tab {Identify}, Select [Identify Schedule]
- Step 2: Highlight Schedule & right click
- Step 3: Nominate the corresponding column & [Generate in Beam Schedule]

IDENTIFY DRAW VIEW TOOL QUANTITY

Delete Extend Break Align Copy Trim Merge Split Move Rotate Mirror Others Drawing Manager Relocate Scale CAD Find & Replace Identify PDF Text Restore CAD Entity Identification Options Layer Split Drawing Others

Beam-1 Layer 1

BEAM MARKING	BEAM SIZE (mm)		SPAN	TOTAL REINFORCEMENT AT LOCATION				
	WIDTH (B)	DEPTH (H)		a	b	c	d	e
1B1	300	700	6600	3H16	3H16	3H32	3H25	3H25
1B2	300	700	6600	3H32	3H16	3H25	3H25	3H25
1B3	300	700	6600	3H25	3H20	3H32+3H32	3H20	3H20
1B4	300	700	6600	3H32+3H32	3H25	3H25	3H32+2H32	3H32+2H32
1B6	300	600	5702	3H16	3H16	3H25	3H20	3H20
1B7	300	600	5582	3H25	3H16	3H16	3H16	3H16
1B5	300	600	3525	3H16	3H16	3H16	3H16	3H16
1B8	300	600	5582	3H16	3H16	3H16	3H32	3H32

Identify Schedule

Identify Schedule Preview

BEAM	BEAM SIZE	SPAN					TOTAL	Correspondi
1B1	300x700	6600	3H16	3H16	3H32	3H25	3H25	Zone-1[1]
1B2	300x700	6600	3H32	3H16	3H25	3H25	3H25	Zone-1[1]
1B3	300x700	6600	3H25	3H20	3H32+3H32	3H20	3H20	Zone-1[1]
1B4	300x700	6600	3H32+3H32	3H25	3H25	3H32+2H32	3H32+2H32	Zone-1[1]
1B6	300x600	5702	3H16	3H16	3H25	3H20	3H20	Zone-1[1]
1B7	300x600	5582	3H25	3H16	3H16	3H16	3H16	Zone-1[1]
1B5	300x600	3525	3H16	3H16	3H16	3H16	3H16	Zone-1[1]
1B8	300x600	5582	3H16	3H16	3H16	3H32	3H32	Zone-1[1]

Beam
Beam Marking
Span Length
Width*Height
Height*Width
Width
Height
> Top Bar
> Top Breaking Point
> Bottom Bar
> Bottom Breaking Point
> Links
Side Bar (B.F)
Summary Info
Remarks
Blank Column

Prompt: Click the first cell of each column to select corresponding relation from the drop-down list.

Insert Delete Find & Replace Merge Generate in Beam Schedule Generate in Element Close

Beam – Identify Schedule

1. Prepare **Excel** table of the beam schedule information
2. **Identify Schedule**
3. Pick the **schedule heading** from the drop down list to match excel data. After that, right click on **2nd row** (excel heading text), and click **delete row**
4. Click **Generate in Beam Schedule**
5. Click **Sync Beam Info**, pick sync beam info to entity, then click ok to close the schedule

BEAM REBAR TABLE - Excel

BEAM	WIDTH	HEIGHT	LEFT TOP BAR	MIDDLE TOP BAR	RIGHT TOP BAR	LEFT BOTTOM BAR	MIDDLE BOTTOM BAR	RIGHT BOTTOM BAR	LINK
TB1	400	600	6D19	4D19	6D19	6D19	4D19	6D19	D13-200
TB2	400	600	3D19	3D19	3D19	4D19	6D19	4D19	D13-250

Identify Schedule

Identify Schedule Preview

Select Sheet: Sheet1 Floor to generate: Zone-1[-1]

Beam	Width	Height	Top 1st	Top 1st	Top 1st	Bottom 1st	Bottom 1st	Bottom 1st	Link
BEAM	WIDTH	HEIGHT	LEFT TOP	MIDDLE	RIGHT TOP	LEFT	MIDDLE	RIGHT	LINK
TB1	400	600	6D19	4D19	6D19	6D19	4D19	6D19	D13-200
TB2	400	600	3D19	3D19	3D19	4D19	6D19	4D19	D13-250

Click the first cell of each column to select corresponding relation from the drop-down list.

Generate in Beam Schedule Generate in Element

DRAW

TOOL QUANTITY

Extend Break Align Copy Element Find Entity Copy Element Find Entity Lock Merge Element and Entity Set Beam Support (Q) Set Common Attribute Others Extend to Support Centerline

Identify Schedule

Define Beam Schedule

Span SUPPORT Span

Length of Support Bar in Span Length of Support Bar in Span Length of Support Bar in Span

To Be Bent at End Span Left Support bar Middle Bar Side Bar Right Support bar To Be Bent at End Span

Move Up Move Down Copy Cell Copy Span Data Check Generate Beam Name Sort Filter Search Cantilever Bar Code Shift Front and Back Span Tips Page Settings

Floor	Beam	Beam Marking	Beam Type	Element Width*	Left	Middle	Right	Length of Support Bar in	Distance from Support	Left	Middle	Right	Length of
Zone-1[-1]	TB1	Beam	400*600	6D19	4D19	6D19							
Zone-1[-1]	TB2	Beam	400*600	3D19	3D19	3D19							

Beam Information Synchronization

Synchronization Direction

☒ Sync beam schedule info to entity

Sync Beam Info

Beam – Generate Element

1. Prepare **Excel** table of the beam schedule information
2. **Identify Schedule**
3. Pick the **schedule heading** from the drop down list to match excel data. After that, right click on **2nd row** (excel heading text), and click **delete row**
4. Click **Generate in Beam Schedule**
5. Click **Generate Element**
6. Draw beams with **line**

The screenshot shows the CubiCost software interface. The main window displays a table of beam schedule information. The table has columns for BEAM, WIDTH, HEIGHT, LEFT TOP BAR, MIDDLE TOP BAR, RIGHT TOP BAR, LEFT BOTTOM BAR, MIDDLE BOTTOM BAR, RIGHT BOTTOM BAR, LINK, LEFT DENSIFIED, RIGHT DENSIFIED, LEGS, and SIDE BAR. The table contains data for beams B1, B2, B3, B4, G1, G2, G3, and G4.

The 'Identify Schedule' dialog is open, showing the 'Identify Schedule' tab. The 'Select Sheet' is 'Sheet1' and the 'Floor to generate' is 'Zone-1[GF]'. The 'Unit in Drawings' is 'mm'. The dialog shows a list of elements to identify, including 'Beam', 'Beam Marking', 'Span Length', 'Width*Height', 'Height*Width', 'Width', 'Height', 'Top Bar', 'Top Breaking Point', 'Bottom Bar', and 'Bottom Breaking Point'. The 'Beam' element is selected.

The 'Generate Element' button is highlighted in the bottom right corner of the dialog.

Beam – Generate Element

Define Beam Schedule

Prompt
Quantity of element to be generated to Single Element. By default, it is 1, and can be modified; Input an integer in the range of [0, 100000].

	Floor	Beam	Beam Marking	Beam Type	Element Width*	Top Bar				Bottom Bar				Side Bar		Link	Left Densified	Right Densified	
						Left	Middle	Right	Length of Support Bar in	Distance from Support	Left	Middle	Right	Length of Support Bar in	Distance from Support				Side Bar (B.F)
1	Zone-1[-1]	TB1		Beam	400*600											D13@200(2)		2	
2		1			(400*600	6D19	4D19	6D19			6D19	4D19	6D19			D13@200(2)	D13@125	D13@125	2
3	Zone-1[-1]	TB2		Beam	400*600											D13@250(2)		2	
4		1			(400*600	3D19	3D19	3D19			4D19	6D19	4D19			D13@250(2)	D13@150	D13@150	2
5	Zone-1[GF]	B1		Beam	400*400											D10@200(2)		2	
6		1			(400*400	8D16	4D16	8D16								D10@200(2)	D10@100	D10@100	2
7	Zone-1[GF]	B2		Beam	200*600											D10@250(2)		2	
8		1			(200*600	5D16	2D16	5D16								D10@250(2)	D10@150	D10@150	2
9	Zone-1[GF]	B3		Beam	700*400											D10@200(3)		3	
10		1			(700*400	10D16	10D16	10D16			10D16	15D16	10D16			D10@200(3)	D10@100	D10@200	3
11	Zone-1[GF]	B4		Beam	200*400											D10@200(2)		2	
12		1			(200*400	3D16	3D16	3D16			3D16	3D16	3D16			D10@200(2)	D10@150	D10@150	2
13	Zone-1[GF]	G1		Beam	600*600											D10@150(4)		4	
14		1			(600*600	10D22	4D22	10D22			5D22	8D22	5D22			D10@150(4)	D10@100	D10@100	4
15	Zone-1[GF]	G2		Beam	400*600											D10@200(2)		2	
16		1			(400*600	6D16	3D16				4D16	6D16	4D16			D10@200(2)	D10@125	D10@125	2
17	Zone-1[GF]	G3		Beam	500*600											D10@100(3)		3	
18		1			(500*600	10D22	10D22				5D22	5D22	3D22			D10@100(3)	D10@100	D10@200	3
19	Zone-1[GF]	G4		Beam	500*600											D10@150(3)		3	
20		1			(500*600	12D22	4D22				5D22	9D22	5D22			D10@150(3)	D10@125	D10@125	3
21																			

Generating element...

Confirm
There exists same-name and same-type beam, click Yes to overwrite, or click No to add.

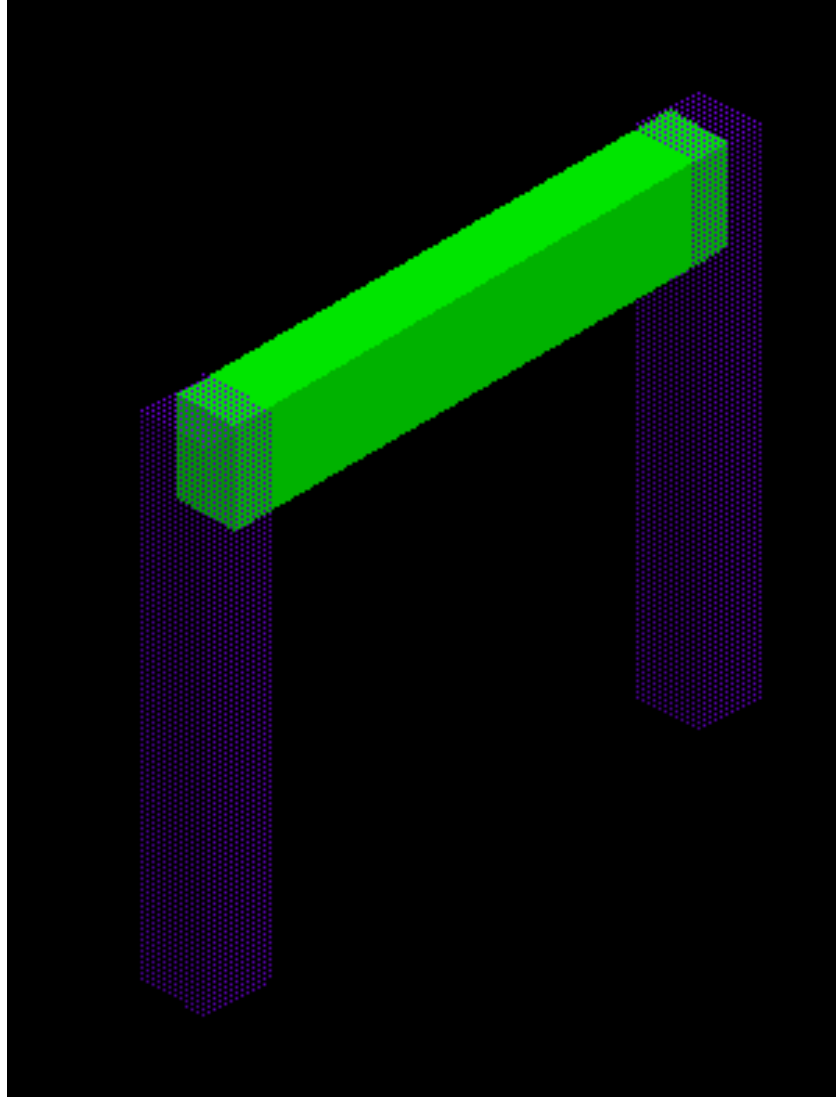
Yes No Cancel

5 5

New Beam New Span Insert Beam Delete Copy Import/Export Generate Element Sync Beam Info OK Cancel

If the beam not modelled yet

If the beam already modelled



1. Beam shall find support from:
 - a) Column @ lower floor
 - b) Wall @ lower floor
 - c) Beam with larger size
 - d) Beam with same size
 - e) Foundation
 - f) Slab
2. To find support, right click selected beam

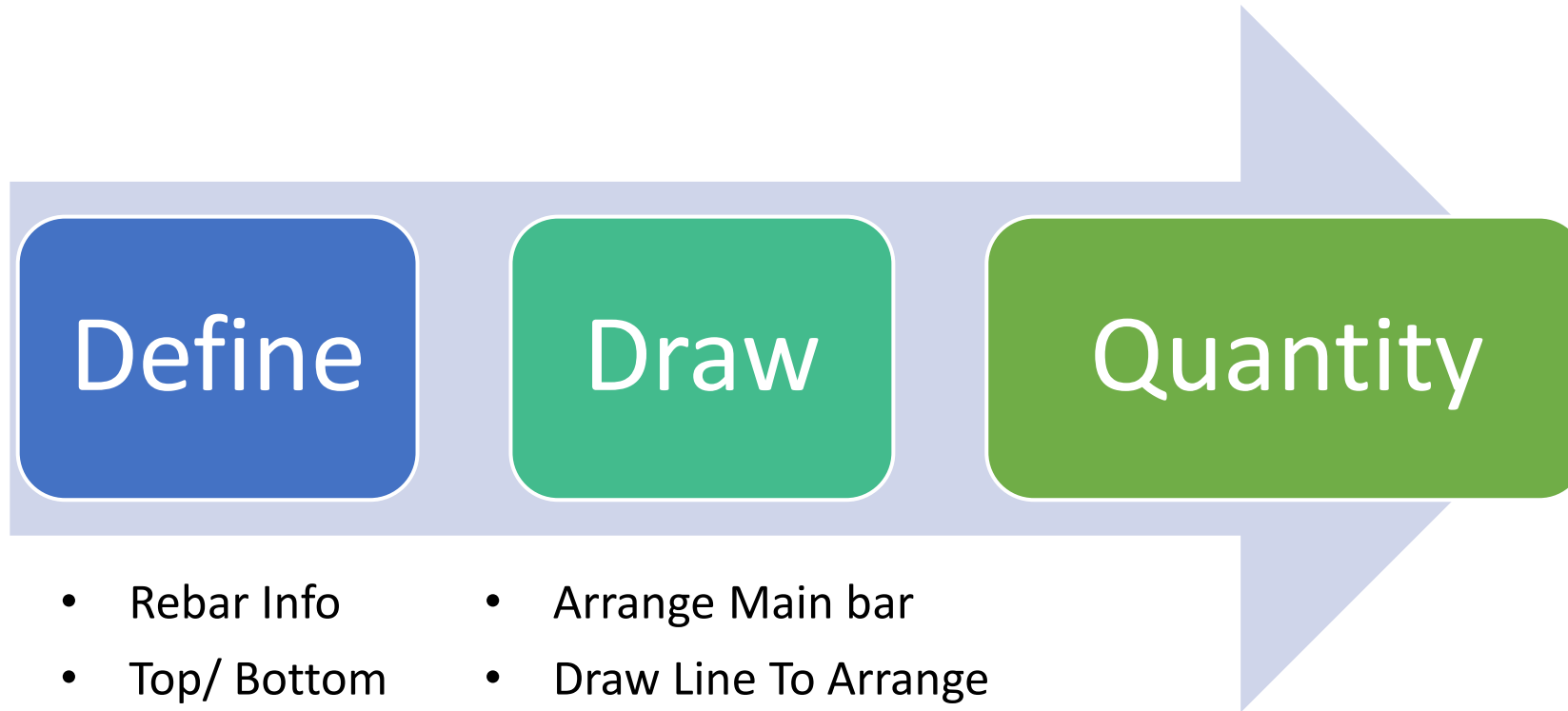
-  Batch identify Support
-  Re-pick Span (F)
-  Set Beam Support (Q)
-  Delete Beam Support (J)

Area Type



Slab

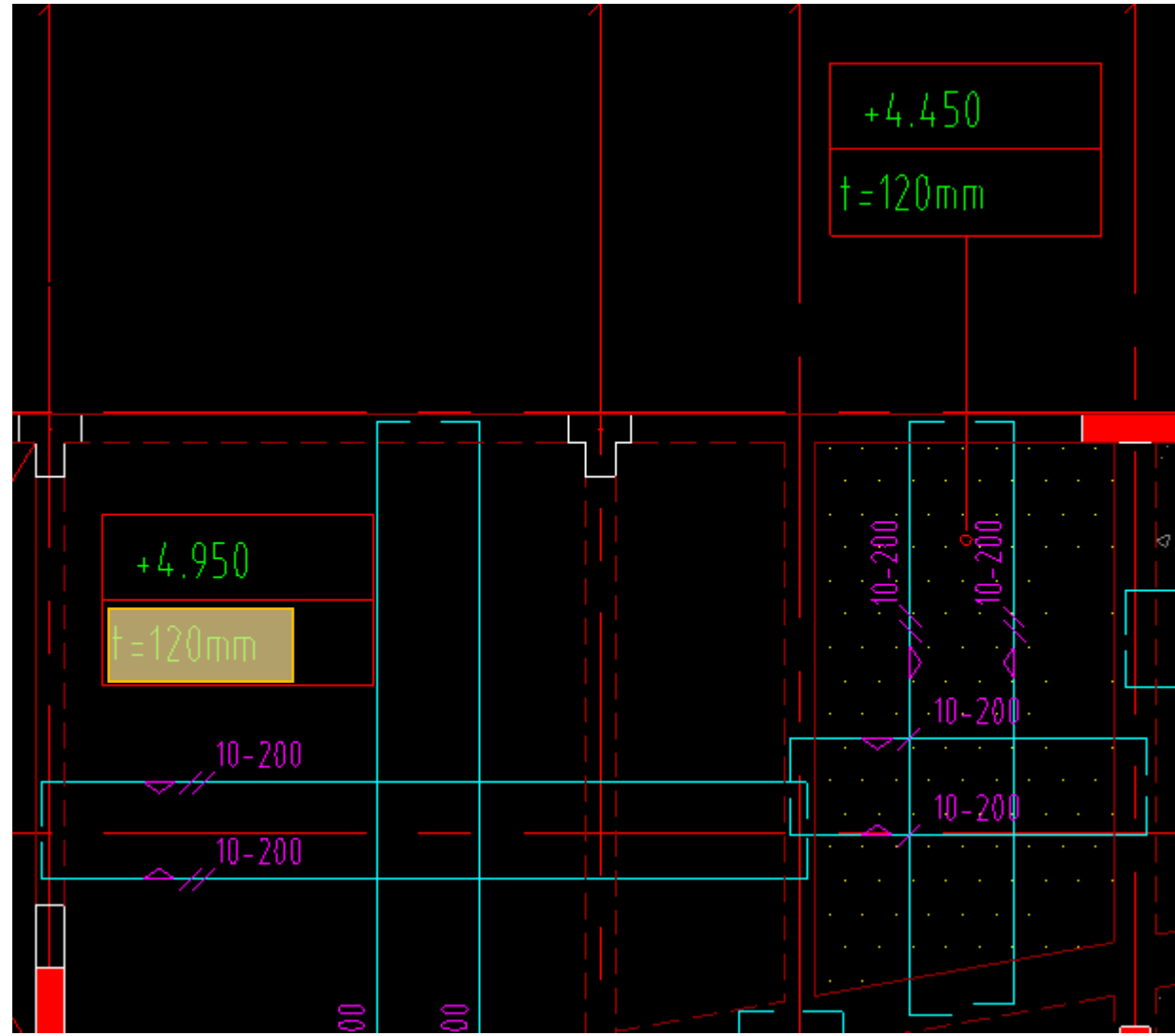
- + -
- Common Element Type
- > Axis
- > Column
- > Wall
- > Door/Window Opening
- > Beam
- ✓ Slab
 - Slab(S)
 - Spiral Slab(S)
 - Drop Panel(V)
 - Slab Opening(N)
 - Slab Main Bar(R)
 - Slab Support Bar(F)
 - Floor Slab Strip(T)
- > Foundation
- > Others
- > Custom



From TASC

Edit Attribute

	Attribute Name	Attribute Value	Add
1	Name	S-1	
2	Material	In-Situ	☐
3	Concrete Grade	(25.0)	☐
4	Rebar Content(kg/m3)		
5	Rebar Info.		
6	Thickness(mm)	(120)	☐
7	Top Elevation(m)	Floor_Bottom_Elevation	☐
8	Slab Number		☐
9	Cover Thickness(mm)	(20)	☐
10	Bar Chair Parametric		
11	Bar Chair Information		☐
12	Linear Bar Chair Direction	Parallel Horizontal Main	☐
13	Hooks		☐
14	Side Main Bar		☐
15	Other Rebars		



1 Click Slab Main Bars

2 In draw function, click Parametric Arrangement

3 Select The raft type

4 Select the rebar arrangement type

5 key in the rebars

6 Click Generate

Slab Reinforcements Layout Plan

Slab Name: S-1, Type: Raft, General: [X]

Rebar Arrangement Type: [X]

Rebar Details:

- Top bar: D10@350
- Bottom bar: D10@350
- Clear span length of longer span (Ln): $(S_n/4)$
- Clear span length of shorter span (Sn): $(S_n/4)$

Note: Rebar arrangement of this type can only be generated in rectangular slabs.

Generate: Rebar and Rebar Content

Copy to Other Floors

X=410 Y=11534 Floor height: 3m

New

Searching element...

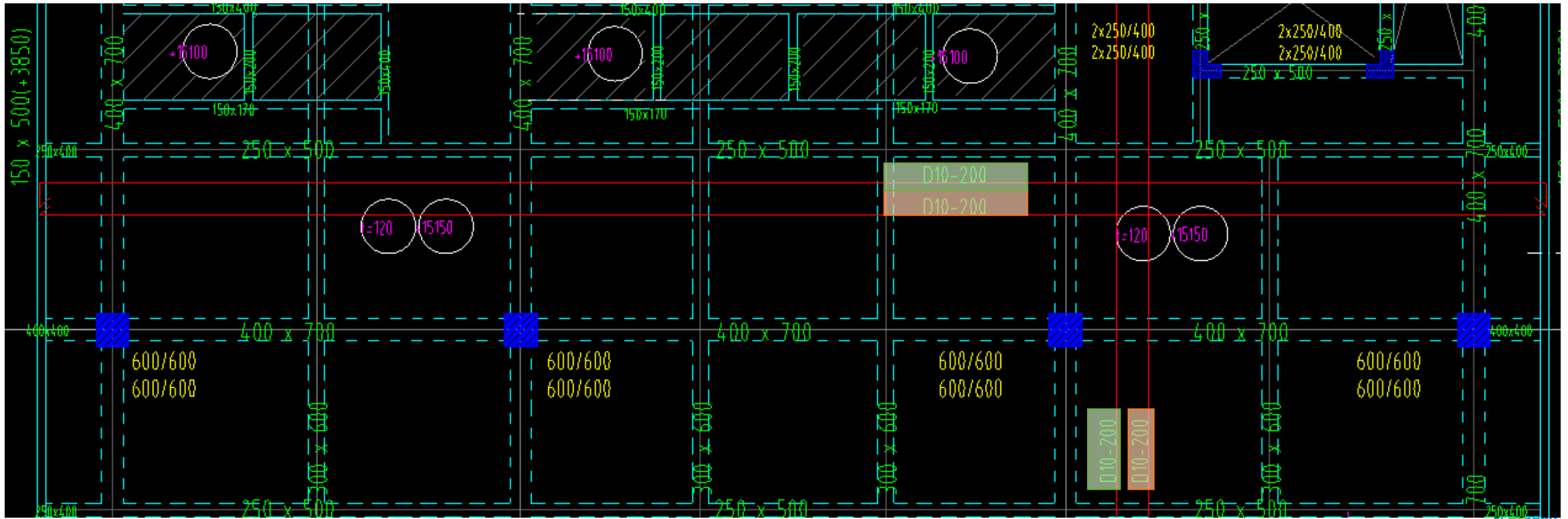
Slab Main Bar

☆ SBar-1[D 10@200 Bottom Bar]

☆ SBar-2[D 10@200 Top Bar]

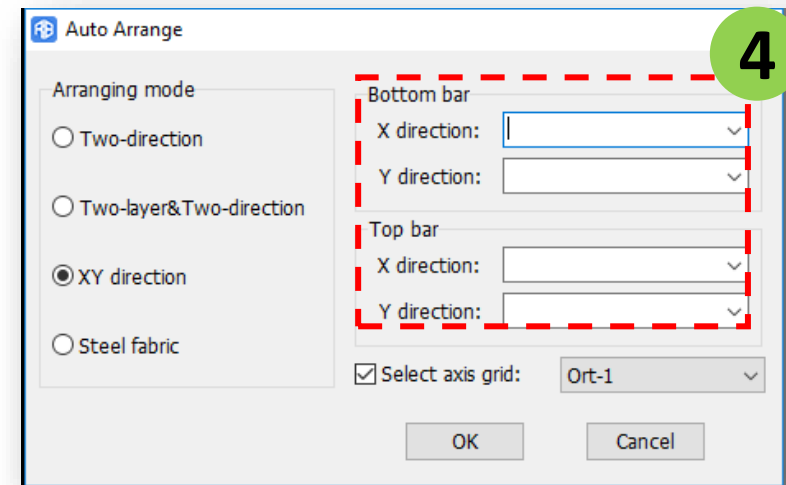
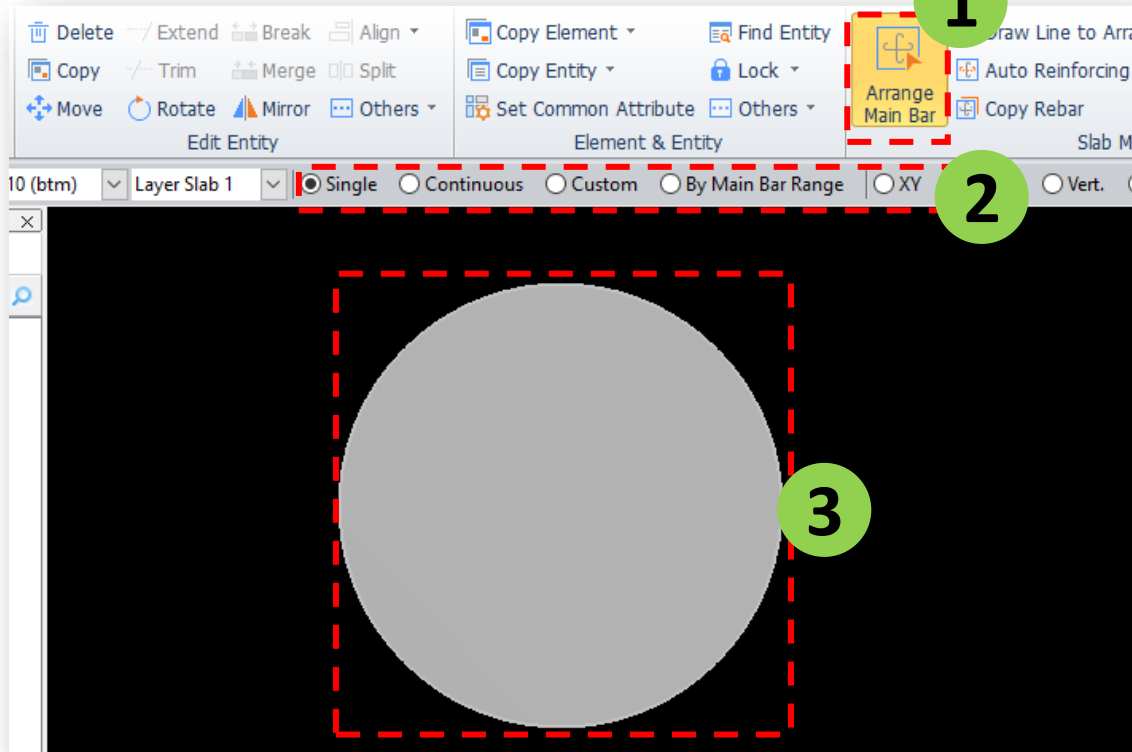
Edit Attribute

	Attribute Name	Attribute Value	Add
1	Name	SBar-1	
2	Rebar Info.	D10@200	☒
3	Category	Bottom Bar	☒
4	Left Bend(mm)	(0)	☐



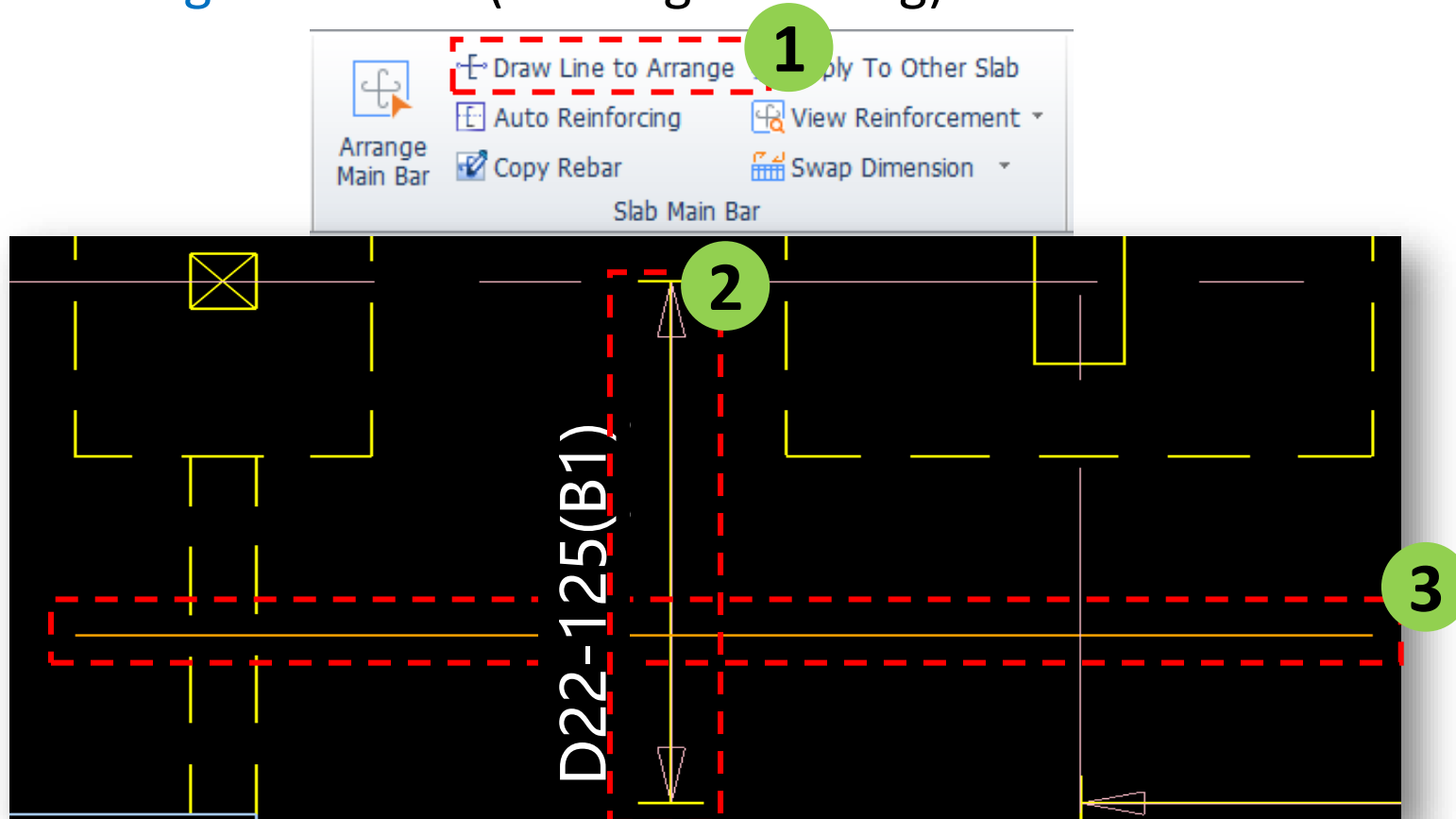
Draw Slab Main bar (Arrange main bar across the whole slab)

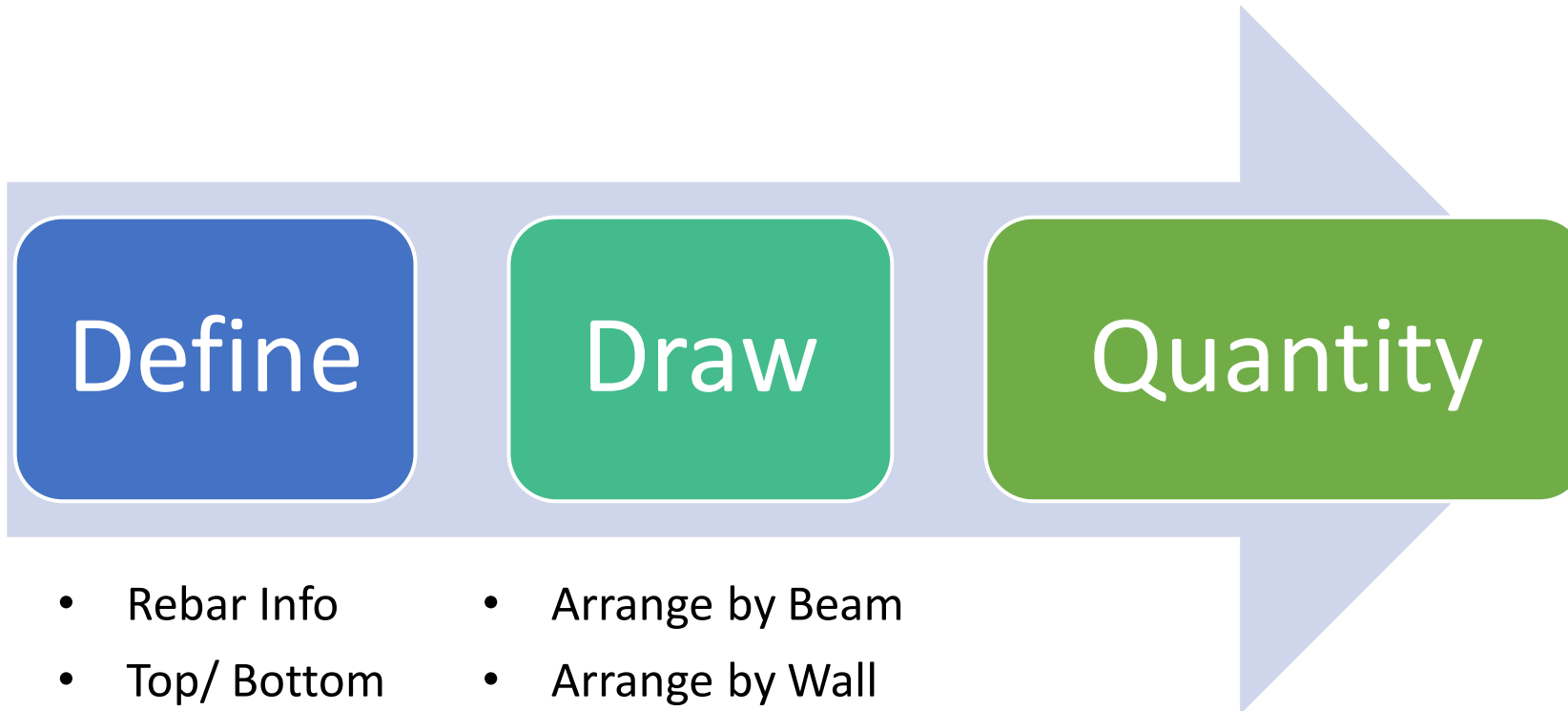
- Step 1: Tab {Draw}, Click [Arrange Main Bar]
- Step 2: Select XY & Single/Continuous
- Step 3(opt): Select Slab(s) & Right Click
- Step 4: Input Rebar Info & Click [Ok]



Draw Slab Main bar (Arrange according to the given bar length)

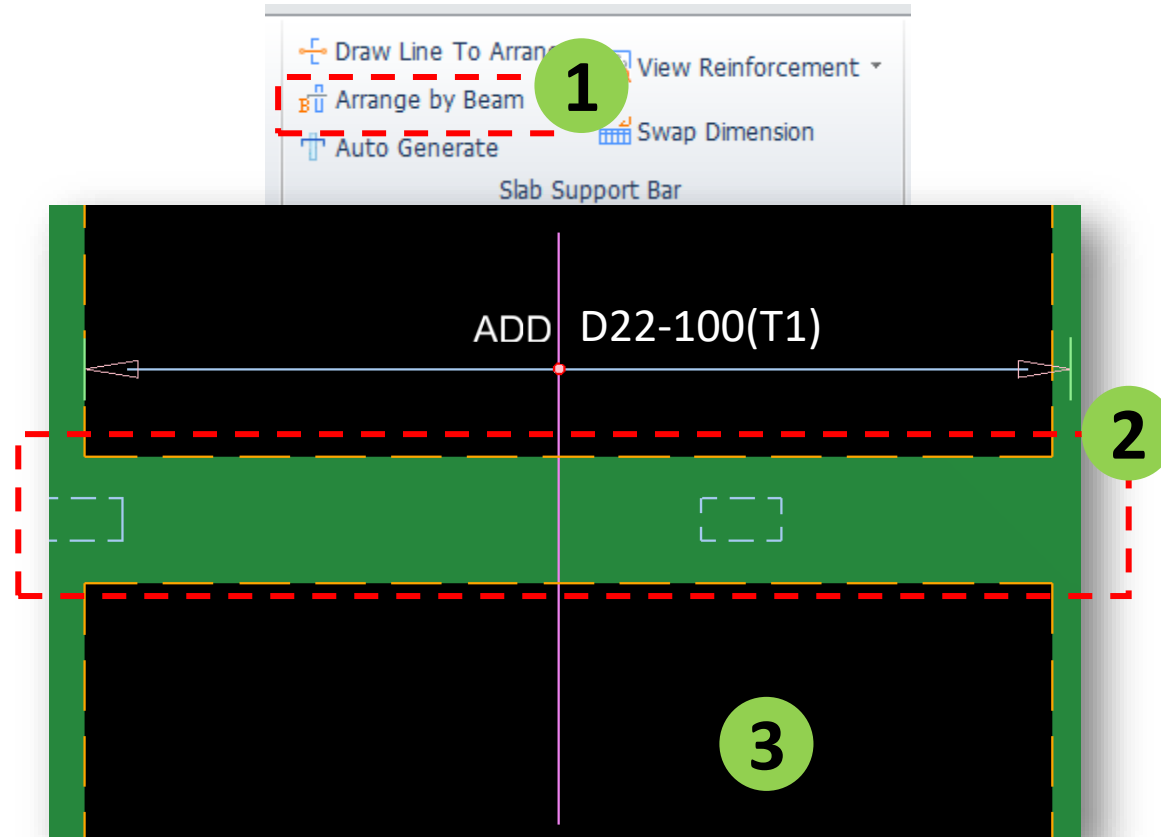
- Step 1: Tab {Draw}, Click [Draw Line to Arrange]
- Step 2: Click the range of rebar *with arrow (starting & ending)
- Step 3: Click the length of rebar (starting & ending)





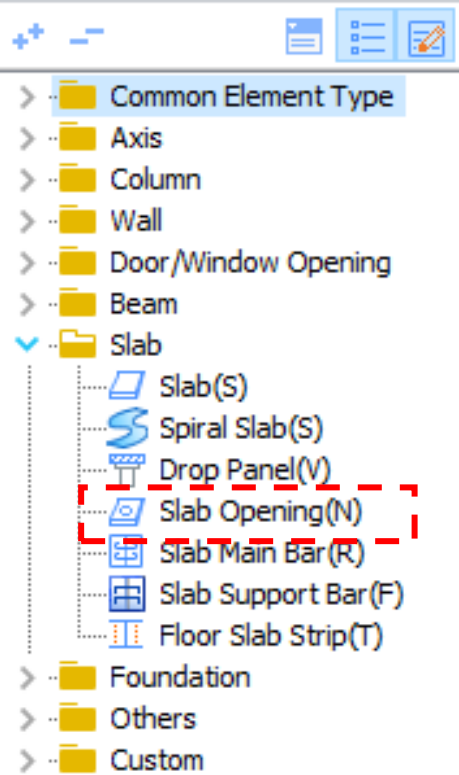
- Rebar Info
- Top/ Bottom
- Arrange by Beam
- Arrange by Wall
- Arrange by Slab Edge

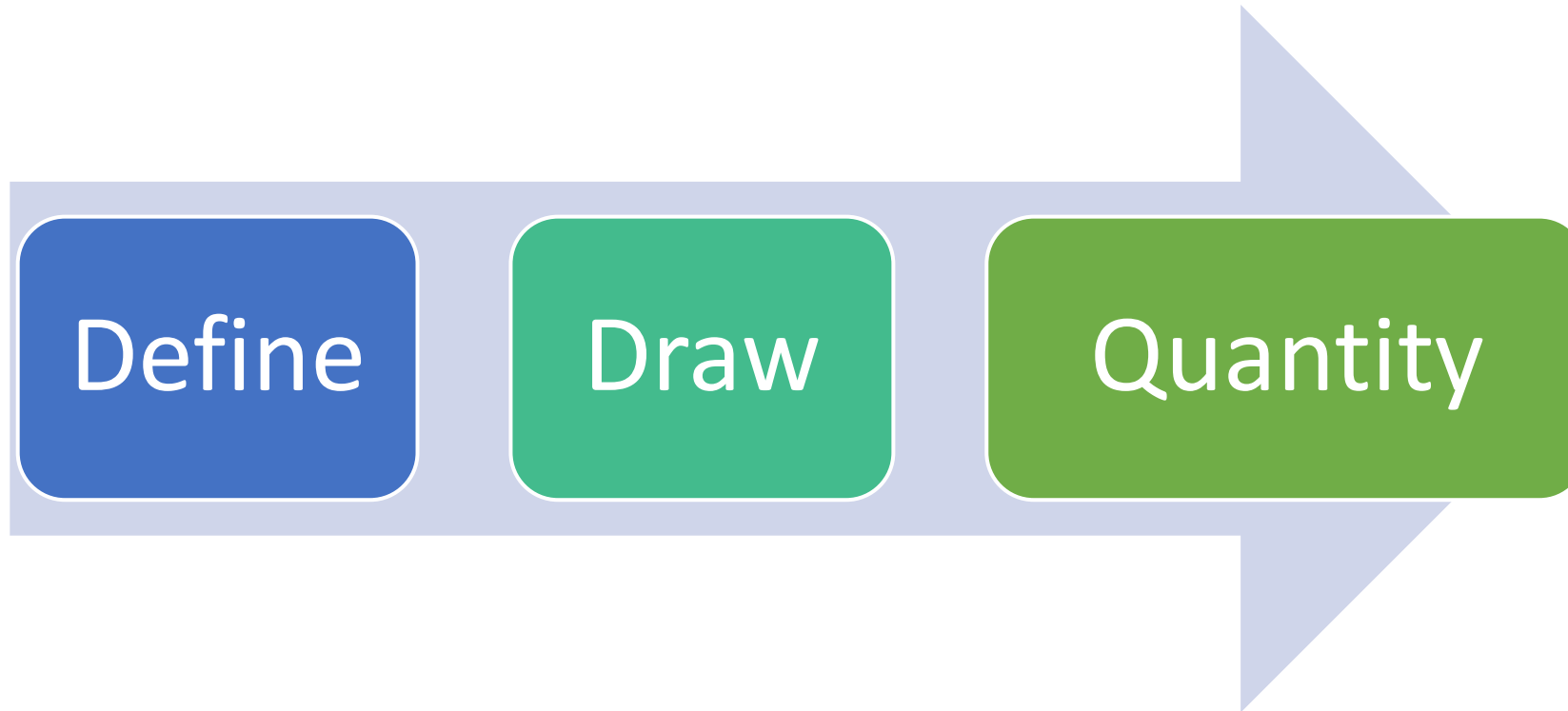
- Step 1: Tab {Draw}, Click [Arrange by Beam]
- Step 2: Click the Beam
- Step 3(opt): Click on the Left Side of the Beam only if both sides are different length

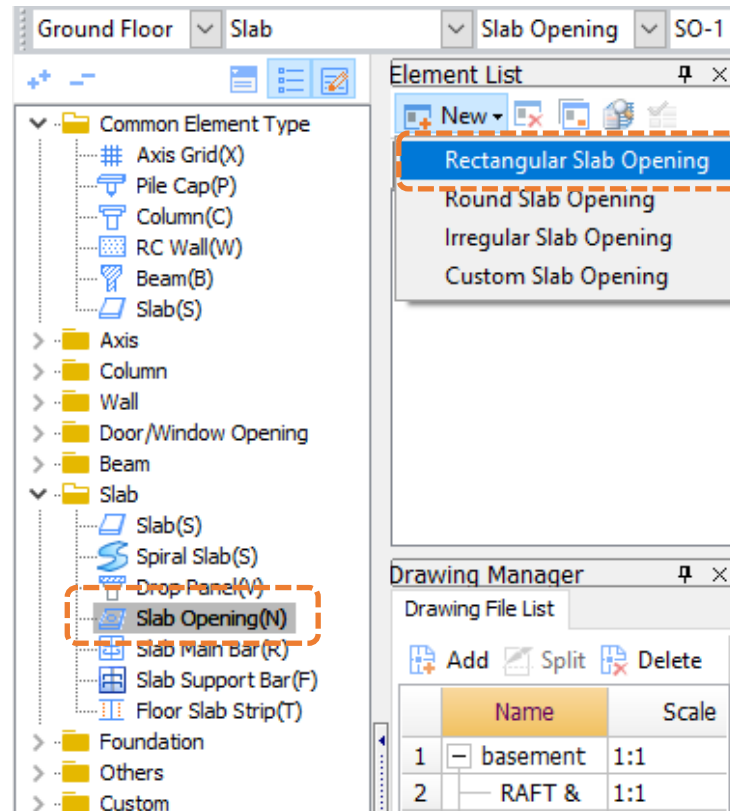


Area Type

RB Slab Opening







Attribute Editor			
	Attribute Name	Attribute Value	Add
1	Name	SO-1	
2	Length(mm)	380	
3	Width(mm)	980	
4	Trimming Bar	...	
5	Trimming Bar		
6	Corner Trimming		
7	Other Rebars		
8	Tension/	Calculate by default setting	
9	Rebar Strength	Calculate by default setting	
10	Summary Info	Trimming Bar For Slab Opening	
11	Calculation Rule	Calculate by default setting	
12	Remarks		
13	+ Construction		
24	+ Development and		
43	+ Display pattern		

input trimmer bars here (if any)

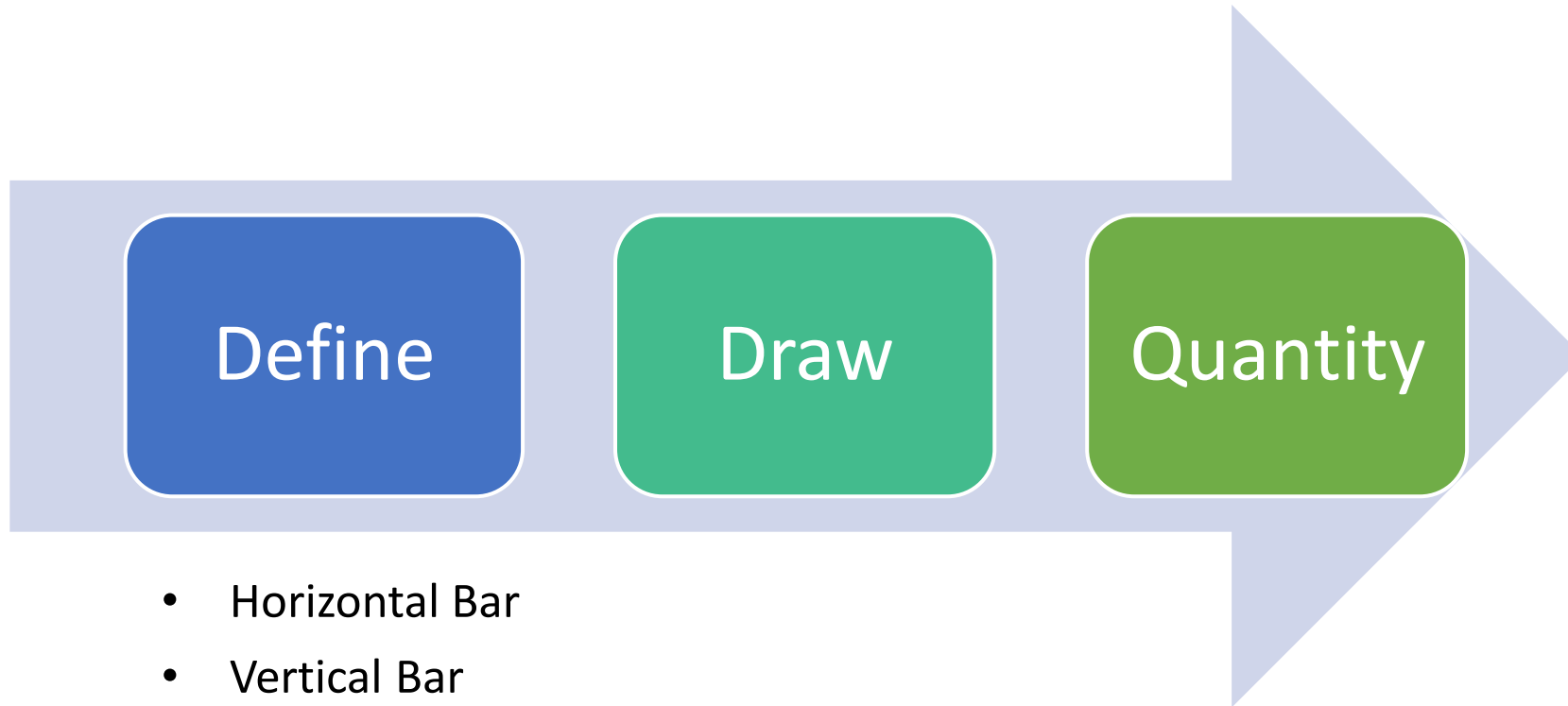
Rebar Input Helper-Trimming Bar Along Shorter Span (Each)	
1. Input Formats	2. Descriptions
4D16	Quantity + Type + Diameter + Length, support adding bar length directly using "-" and separating bottom bars and top bars by "/" if there are.
2D14-2000	
4D16/4D18	
2D16-2000/2D18-2000	

Linear Type

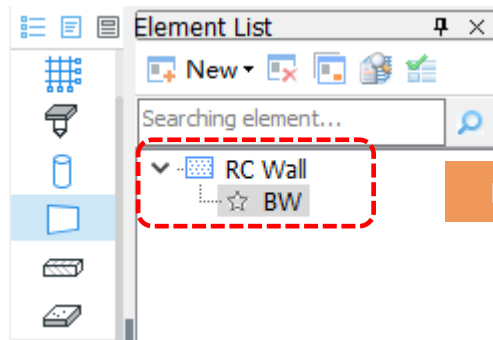


Wall

- Common Element Type
 - Axis Grid(X)
 - Pile Cap(P)
 - Column(C)
 - RC Wall(W)
 - Beam(B)
 - Slab(S)
- Axis
- Column
- Wall
 - RC Wall(W)
 - Masonry Wall(W)
 - Wall Column(C)
 - Embedded Beam(K)
 - Tie Bar(T)
- Door/Window Opening
- Beam
- Slab
- Foundation
- Others
- Custom

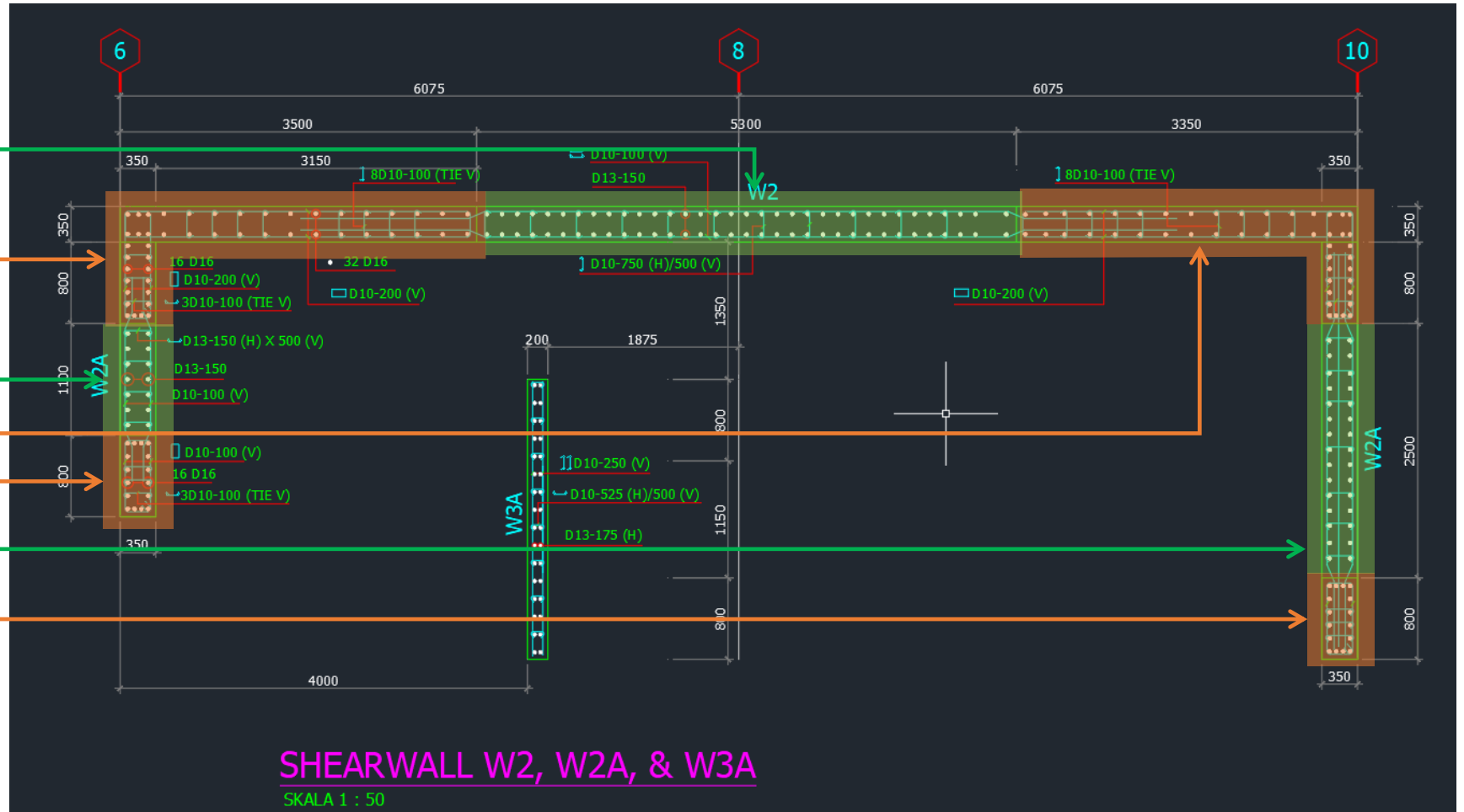


- Horizontal Bar
- Vertical Bar
- Hooks

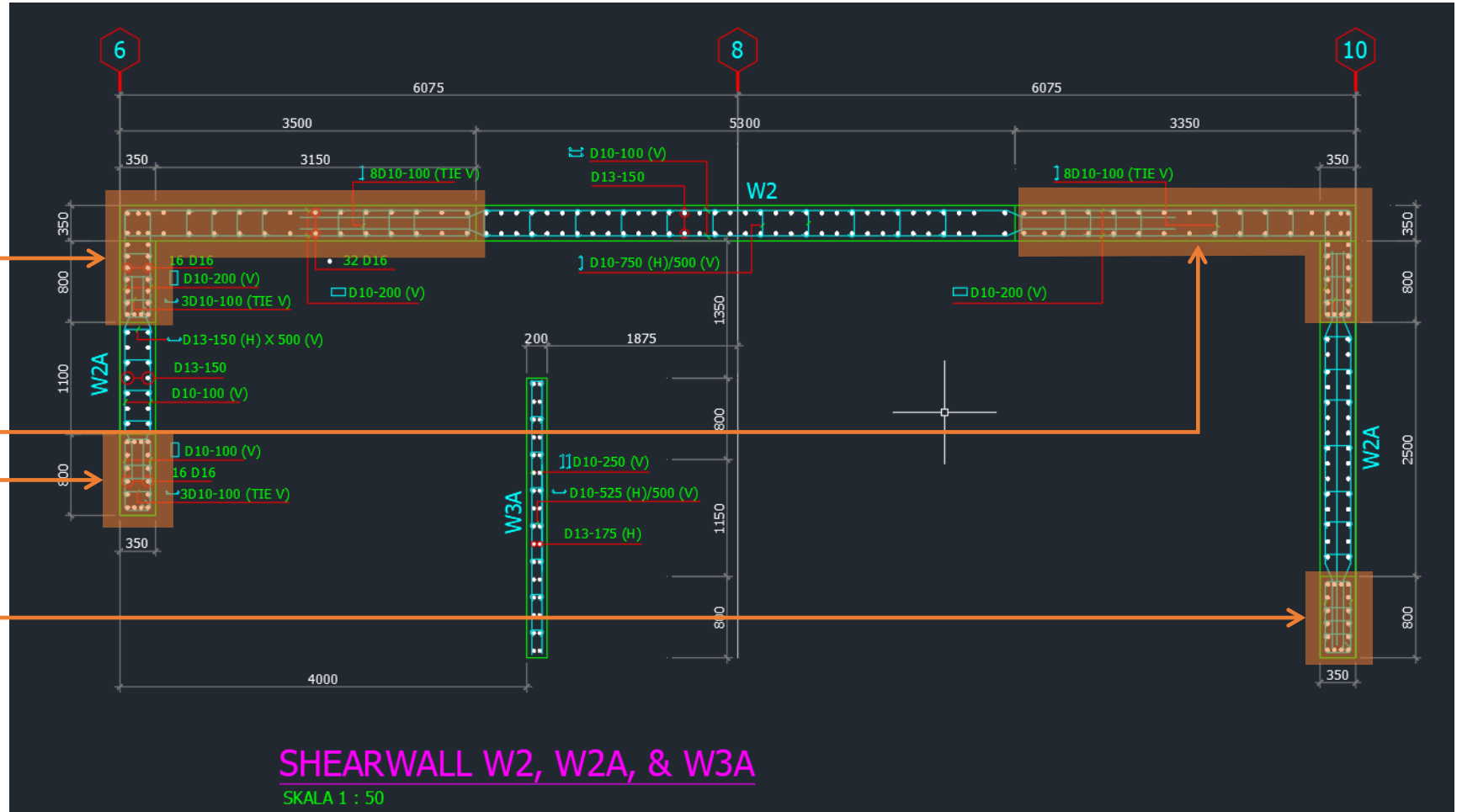


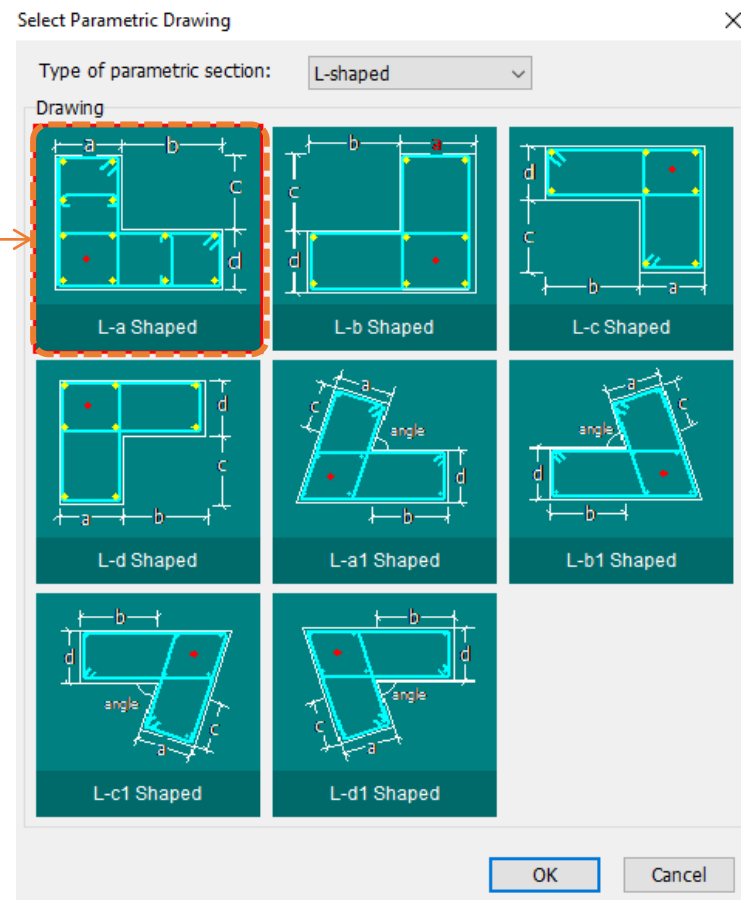
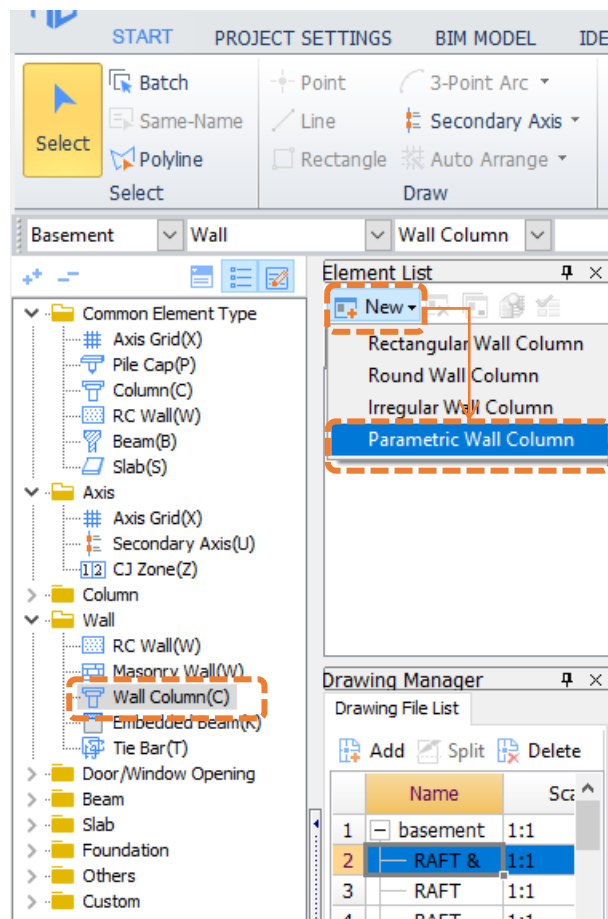
Attribute Editor			
	Attribute Name	Attribute Value	Add
1	Name	BW	
2	Category	Structural Wall	☐
3	Material	In-Situ	☐
4	Thickness(mm)	250	☐
5	Axis from Left	(125)	☐
6	Horizontal	(2)D10@150	☐
7	Vertical	(1)D19@150+(1)D16@150	☐
8	Binder		☐
9	Hooks	D10@450*450	☐
10	Additional		☐
11	Additional Vertical		☐
12	Other Rebars		☐
13	Category Name	(BW)	☐
14	Start Top	Floor_Top_Elevation	☐
15	End Top	Floor_Top_Elevation	☐
16	Start Bottom	Floor_Bottom_Elevation	☐
17	End Bottom	Floor_Bottom_Elevation	☐
18	Remarks		☐
19	Other Attribute		☐
20	Summary Info	RC Wall	☐
21	Cover Thickness	50/20	☐
22	Main Bar	Set Dowel Bar	☐
23	Add Lap To	No	☐
24	Calculation Rule	Calculate by default setting	☐

- Common Element Type
 - Axis Grid(X)
 - Pile Cap(P)
 - Column(C)
 - RC Wall(W)
 - Beam(B)
 - Slab(S)
- Axis
 - Axis Grid(X)
 - Secondary Axis(U)
 - CJ Zone(Z)
- Column
- Wall
 - RC Wall(W)
 - Masonry Wall(W)
 - Wall Column(C)
 - Embedded Beam(K)
 - Tie Bar(T)
- Door/Window Opening
- Beam
- Slab
- Foundation
- Others
- Custom



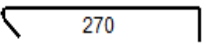
- ▼ Common Element Type
 - Axis Grid(X)
 - Pile Cap(P)
 - Column(C)
 - RC Wall(W)
 - Beam(B)
 - Slab(S)
- ▼ Axis
 - Axis Grid(X)
 - Secondary Axis(U)
 - CJ Zone(Z)
- > Column
- ▼ Wall
 - RC Wall(W)
 - Masonry Wall(W)
 - Wall Column(C)
 - Embedded Beam(K)
 - Tie Bar(T)
- > Door/Window Opening
- > Beam
- > Slab
- > Foundation
- > Others
- > Custom





Edit Attribute			
	Attribute Name	Attribute Value	Add
1	Name	WallCol-1	
2	Category	Wall Column	☐
3	Material	In-Situ	☐
4	Section Shape	L-a Shaped	☐
5	Section Width(B)(mm)	3500	☐
6	Section Height(H)(mm)	1150	☐
7	All Main Bars	48D16	☐
8	Other Links	485	☐
9	Other Rebars		☐

Other Link Types

	Link	Link information	Shape	Remarks
1	485	11D13@100		270

14	Summary Info	Wall Column	☐
15	Cover Thickness(mm)	(40)	☐
16	Top Densified Range	(max(Hn/6, hc(D), 450))	☐
17	Bottom Densified	(max(Hn/6, hc(D), 450))	☐
18	Dowel Bar Structure	Set Dowel Bar	☐
19	Dowel Bar Information		☐
20	Calculation Rule	Calculate by default setting	
21	Lap Setting	Calculate by default setting	
22	Tension/Compression	Calculate by default setting	
23	Rebar Strength Setting	Calculate by default setting	
24	Links Adjustment		☐

Input the other links inside the wall with other rebars or draw link in edit section

Edit Section

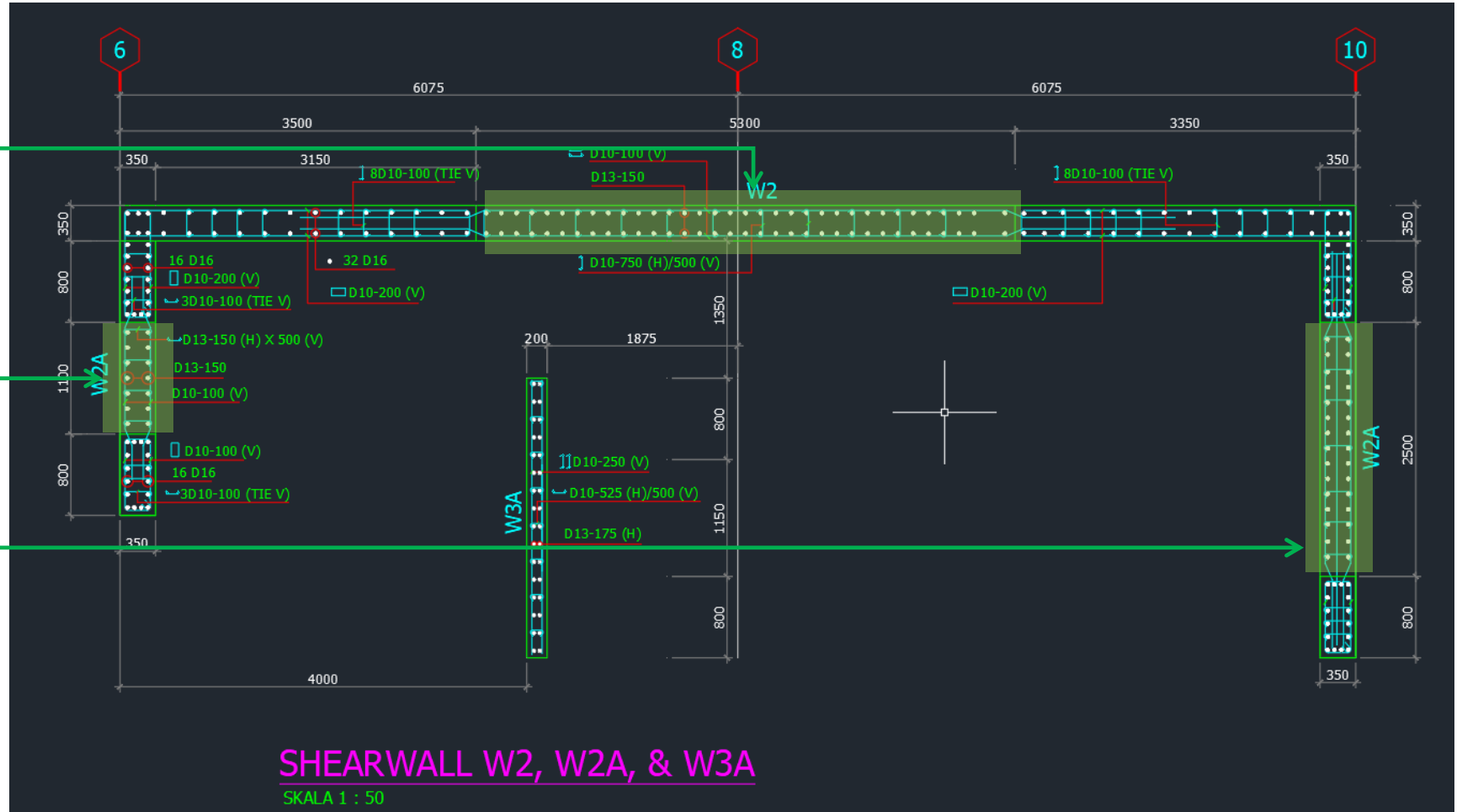
Corner Bar Side Bar Special Methods Align Draw Link Edit Main Bar Edit Links Bend Extend/Trim End Delete

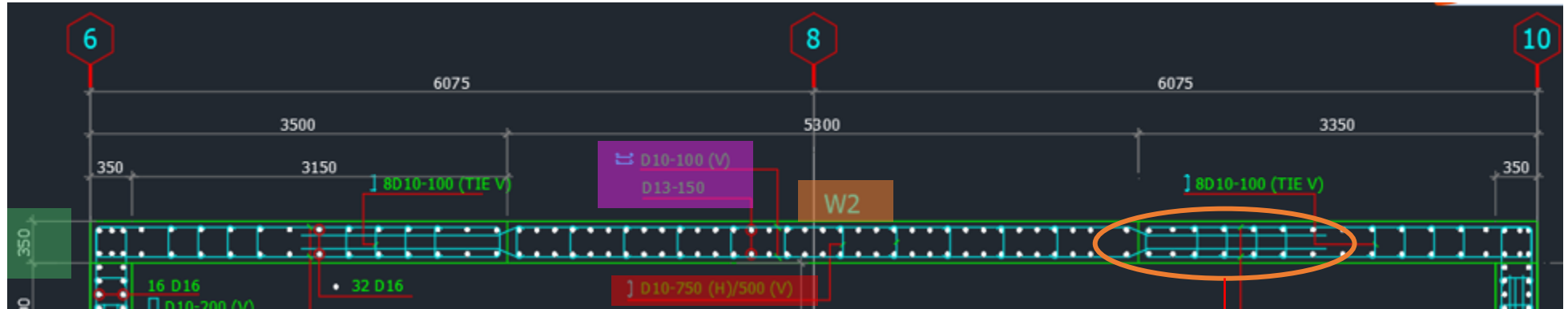
Rebar info: D10@200



Click on the white & green texts to edit the section & rebar info.

- ▼ Common Element Type
 - Axis Grid(X)
 - Pile Cap(P)
 - Column(C)
 - RC Wall(W)
 - Beam(B)
 - Slab(S)
- ▼ Axis
 - Axis Grid(X)
 - Secondary Axis(U)
 - CJ Zone(Z)
- > Column
- ▼ Wall
 - RC Wall(W)
 - Masonry Wall(W)
 - Wall Column(C)
 - Embedded Beam(K)
 - Tie Bar(T)
- > Door/Window Opening
- > Beam
- > Slab
- > Foundation
- > Others
- > Custom





New ▾

Searching element...

- RC Wall
 - BW
 - W2
 - W2A
 - W3A

Edit Attribute

	Attribute Name	Attribute Value	Add
1	Name	W2	
2	Category	Structural Wall	
3	Material	In-Situ	
4	Thickness(mm)	350	
5	Axis from Left Side(mm)	(175)	
6	Horizontal Distribution Bar	(2)D10@100	
7	Vertical Distribution Bar	(2)D13@150	
8	Binder		
9	Hooks	D10@750*500	
10	Additional Horizontal Bar		
11	Additional Vertical Bar		
12	Other Rebars		
13	Category Name	(W2)	
14	Start Top Elevation(m)	Floor_Top_Elevation	
15	End Top Elevation(m)	Floor_Top_Elevation	
16	Start Bottom Elevation(m)	Floor_Bottom_Elevation	
17	End Bottom Elevation(m)	Floor_Bottom_Elevation	

Calculation Rules

☐ Column
 ☒ Wall
 ☐ Beam
 ☐ Slab
 ☐ Foundation
 ☐ Ground Beam
 ☐ Masonry Structure

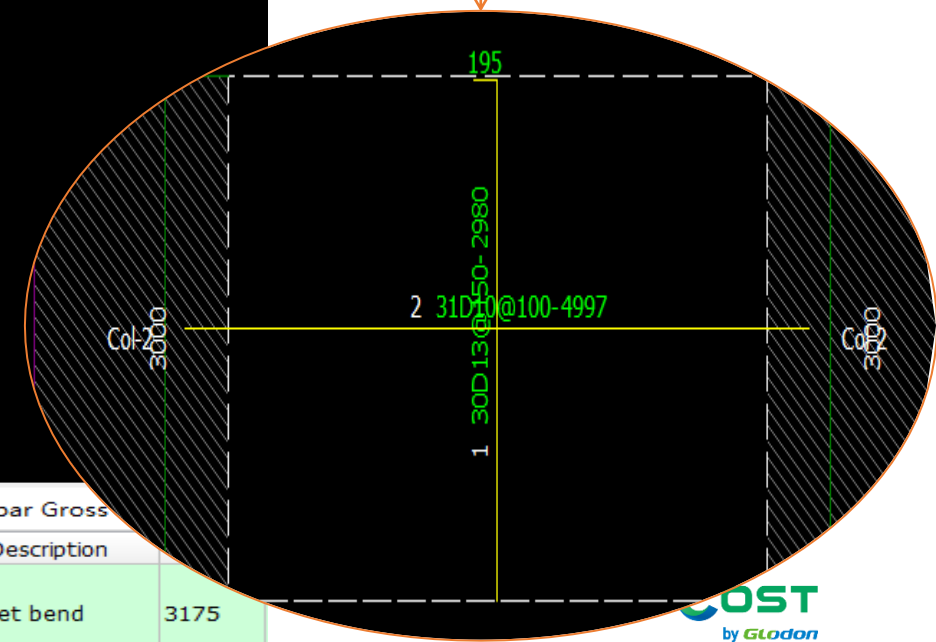
End of wall

End	With column	With opening
Plan view		Plan view

In project setting → calculation rule, arrange end of wall with column to match the detail

- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Select wall
- Step 3: Click [Edit Rebar] and [Rebar 3D]
- Step 4: Click [Rebar Layout] to check Rebar Arrangement

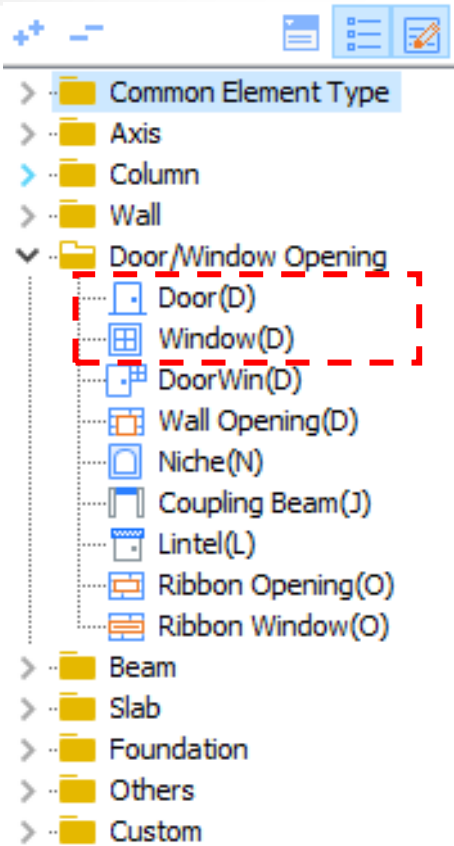
	Rebar	Strength	Diamete	Shape	Shape	Calculation Formula	Formula Description	
1*	1	BJTD-40	13	601	2980	3000-20+15*d	Wall-Cover+Set bend	3175

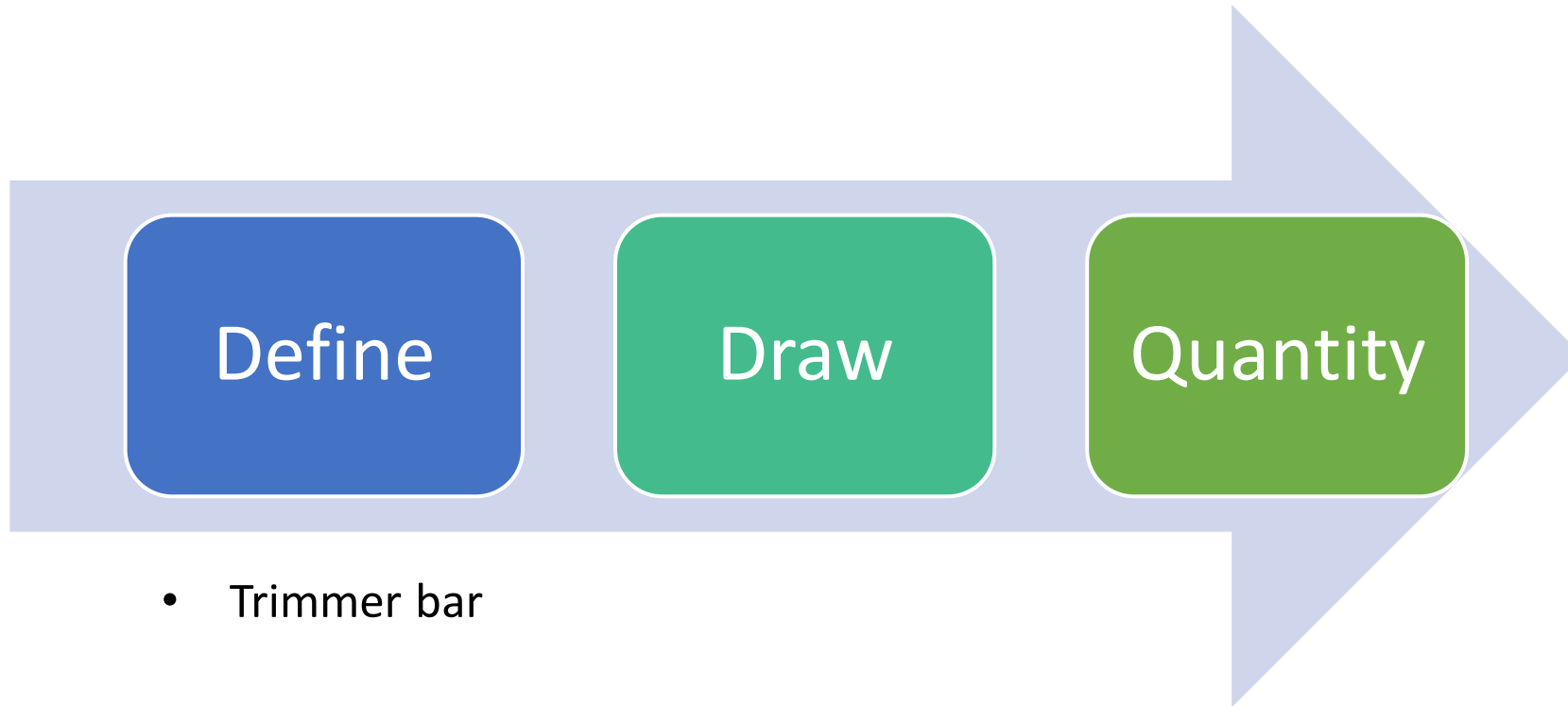


Point Type



Door/ Window

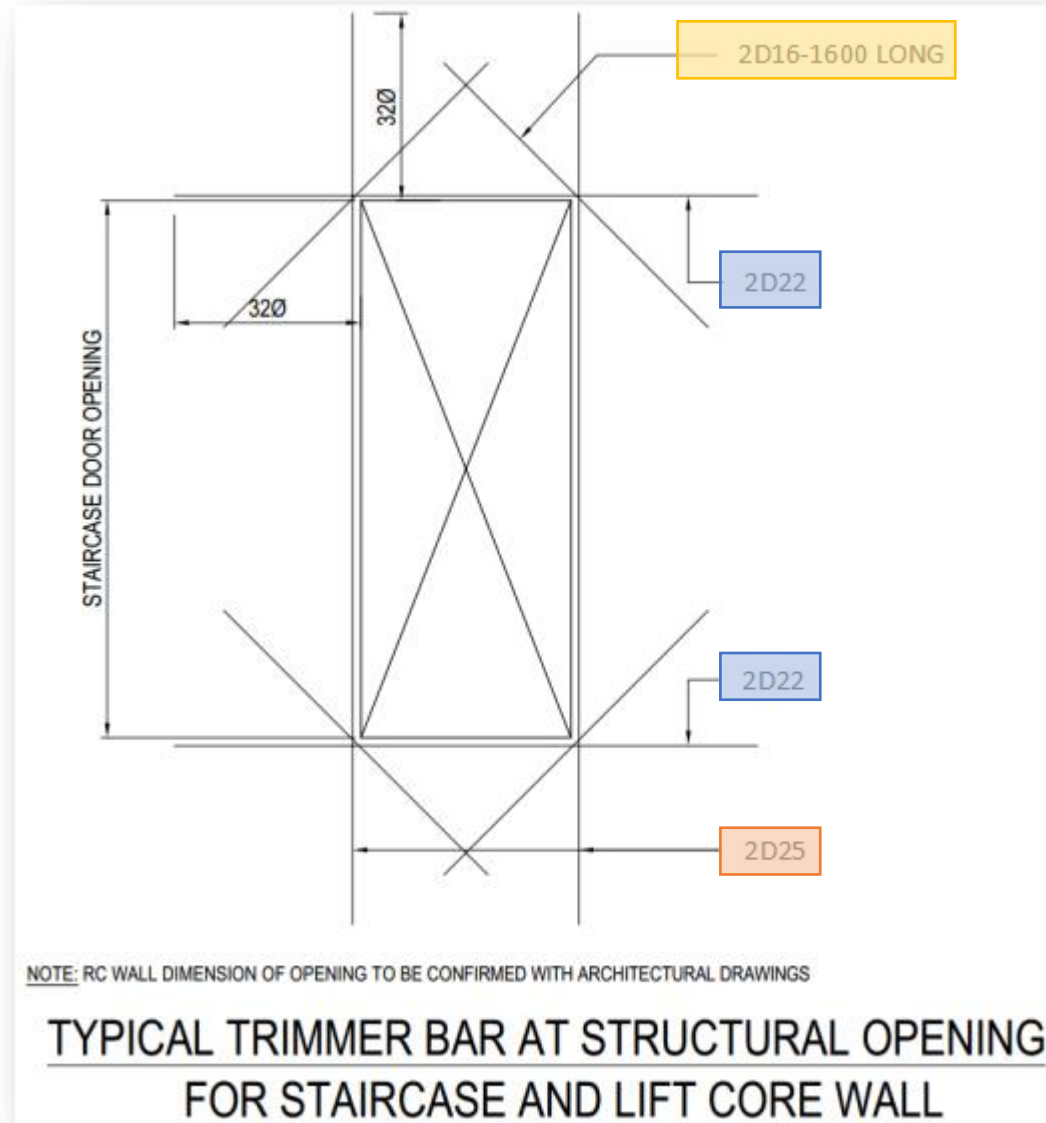




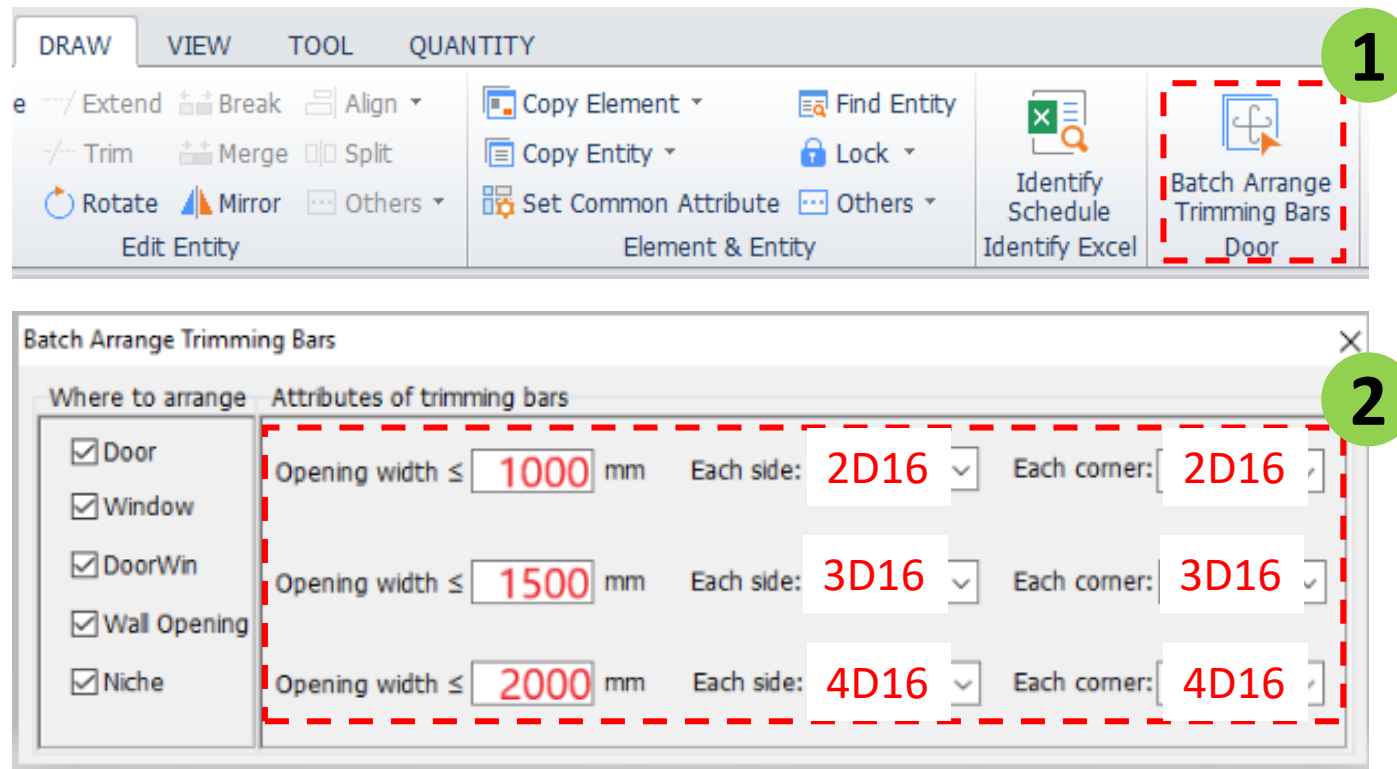
- Trimmer bar

Edit Attribute

	Attribute Name	Attribute Value	Add
1	Name	Lift Opening	
2	Opening Width(mm)	2000	☐
3	Opening Height(mm)	2100	☐
4	Height Above Floor(mm)	1	☐
5	Side Trimming Bar (Each)	2D22/2D25	☐
6	Corner Trimming Bars (All)	8D16-1600	☐
7	Other Rebars		
8	Tension/Compression	Calculate by default	
9	Rebar Strength Setting	Calculate by default	
10	Category Name	(Lift Opening)	☐
11	Summary Info	Trimming Bar	☐
12	Remarks		☐
13	+ Construction Information		
24	+ Display pattern		



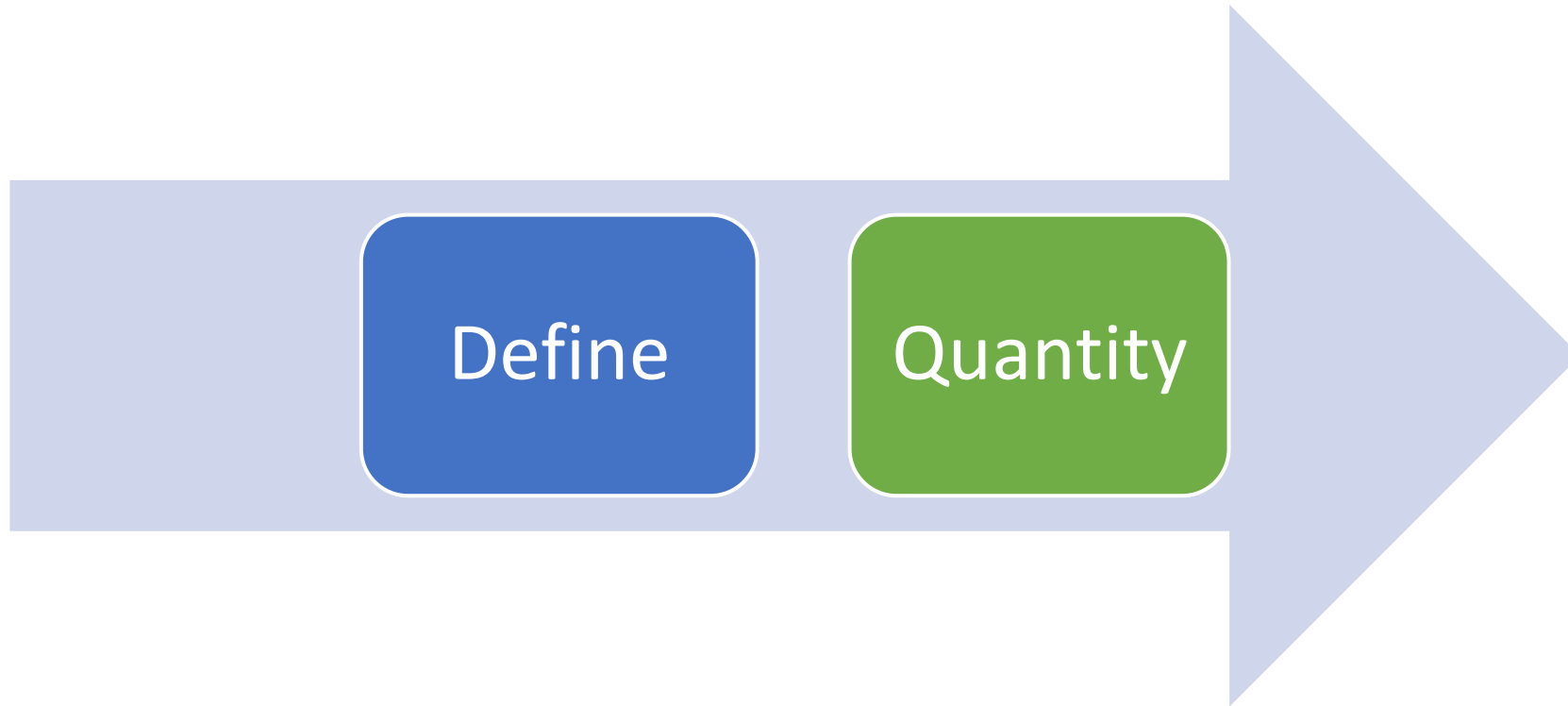
- Step 1: Tab {Draw}, Select [Batch Arrange Trimming Bars]
- Step 2: Fill in the Opening Width & Rebar for Side & Corner



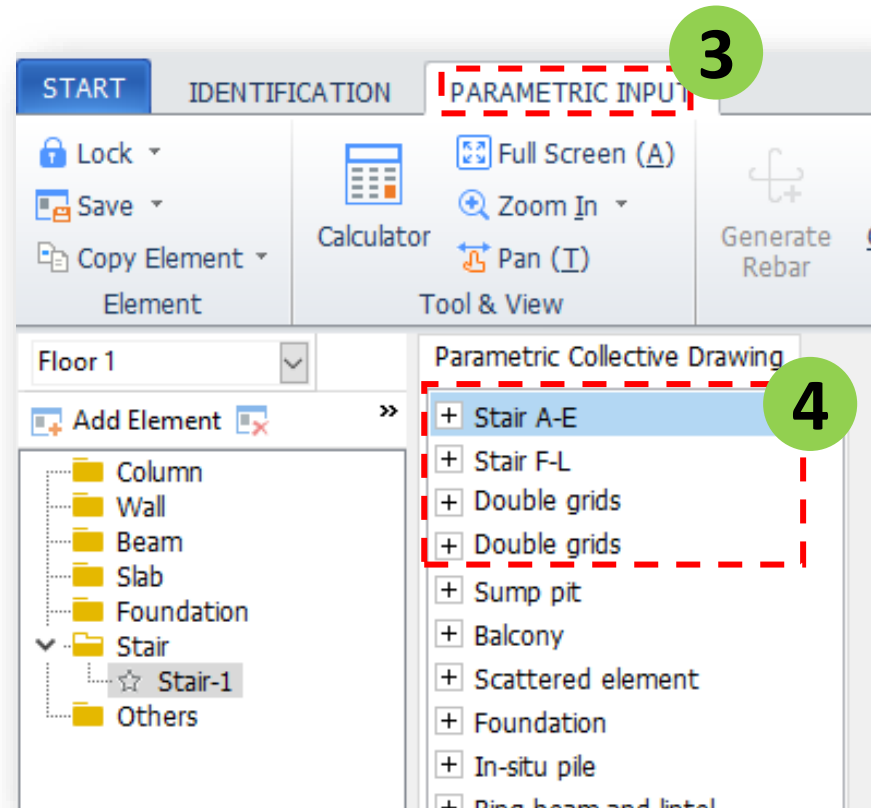
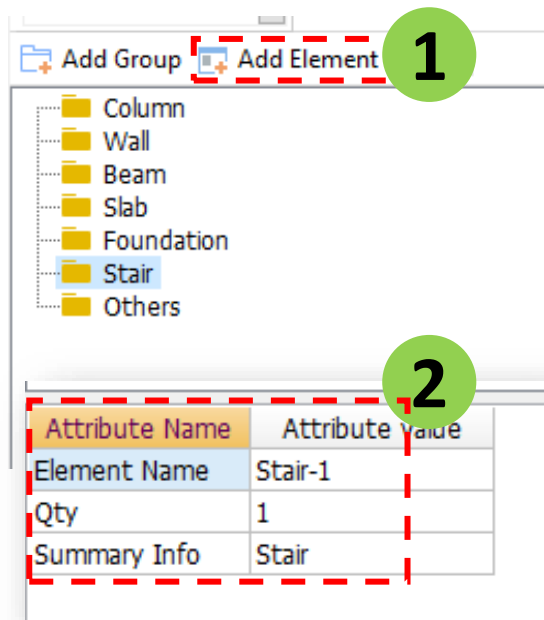


Single Element





- Step 1: Module {Single Element}, Click [Add Element]
- Step 2: Rename & Define no. of staircase
- Step 3: Click [Parametric Input]
- Step 4: Select suitable staircase



- Step 1: Edit Selected Staircase Type
- Step 2: Input all data in green
- Step 3: Click [Generate Rebar]

PARAMETRIC INPUT Tell me (Ctrl+Alt+E)

Full Screen (A) Generate Rebar Calculate View Quantity by Category(E) Print Element Rebar Schedule

Zoom In Quantity

Pan (I)

View

Parametric Collective Drawing

- Stair A-E
 - AT-stair
 - BT-stair
 - CT-stair
 - DT-stair**
 - ET(1)-Stair
 - ET(2)-Stair
 - ET(3)-Stair
 - ET(4)-Stair
 - A-A landing slab
 - B-B landing slab
- Stair F-L
- Double grids

Name	Tot
240	21 D
400	36 D
500	41 D
Cover Thickness(bhc)	21

DT-stair slab thickness(h): 120
Total height of steps(h): 1500
Riser in stair slabs(1): 012@125

Step width * NumberHorizontal net length
Stair slab distribution b4(6) 08@250

Stair beam(b4) Lower slab net length

Bottom main bar 2d 012@125

Higher slab net lengthbq

Note: 1.Rebar in stair slab can also be input directly in the following form.

- Step 1: Click on [Calculate]
- Step 2: Click [View Quantity by Category]

en (A)

Generate Rebar

Calculate

View Quantity by Category(E)

Print Element Rebar Schedule

Quantity

1

2

Parametric Collective Drawing

Stair A-E

AT-stair

BT-stair

CT-stair

DT-stair

ET(1)-Stair

ET(2)-Stair

ET(3)-Stair

ET(4)-Stair

A-A landing slab

B-B landing slab

Stair F-L

Double grids

Double grids

Sump pit

Balcony

Scattered element

Foundation

In-situ pile

Ring beam and lintel

Common stairs

Pile Cap

Name

Tal

240

240

400

400

500

400

Cover Thickness(bhc)

20

DT stair slab thickness(h): 120

Total height of steps(h): 1500

Rebar in stair slab(1) D12@125

Up

Lower slab net length

Higher slab net length

Stair slab distribution b@250

Step width * NumberHorizontal net length

Stair beam(2) D12@200

Lower slab net length

Higher slab net length

Bottom main bar 2d D12@125

Stair beam

Higher slab net length

Note: 1.Rebar in stair slab can also be input directly in the following form.

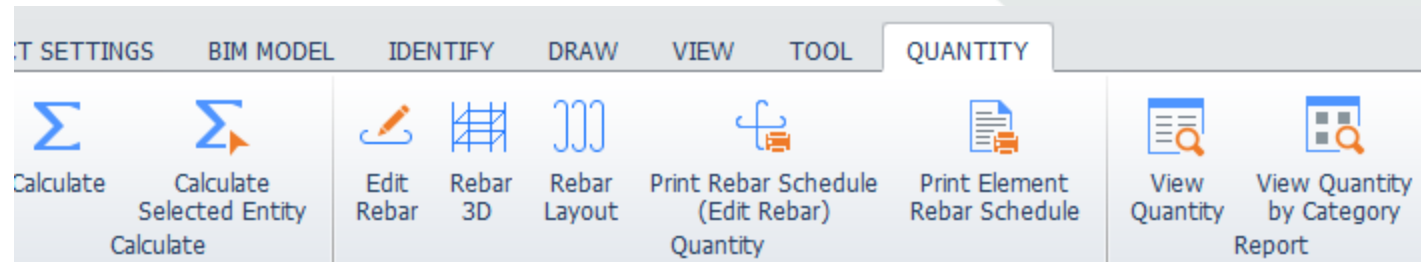
Single Element Rebar Gross Weight(kg):94.845

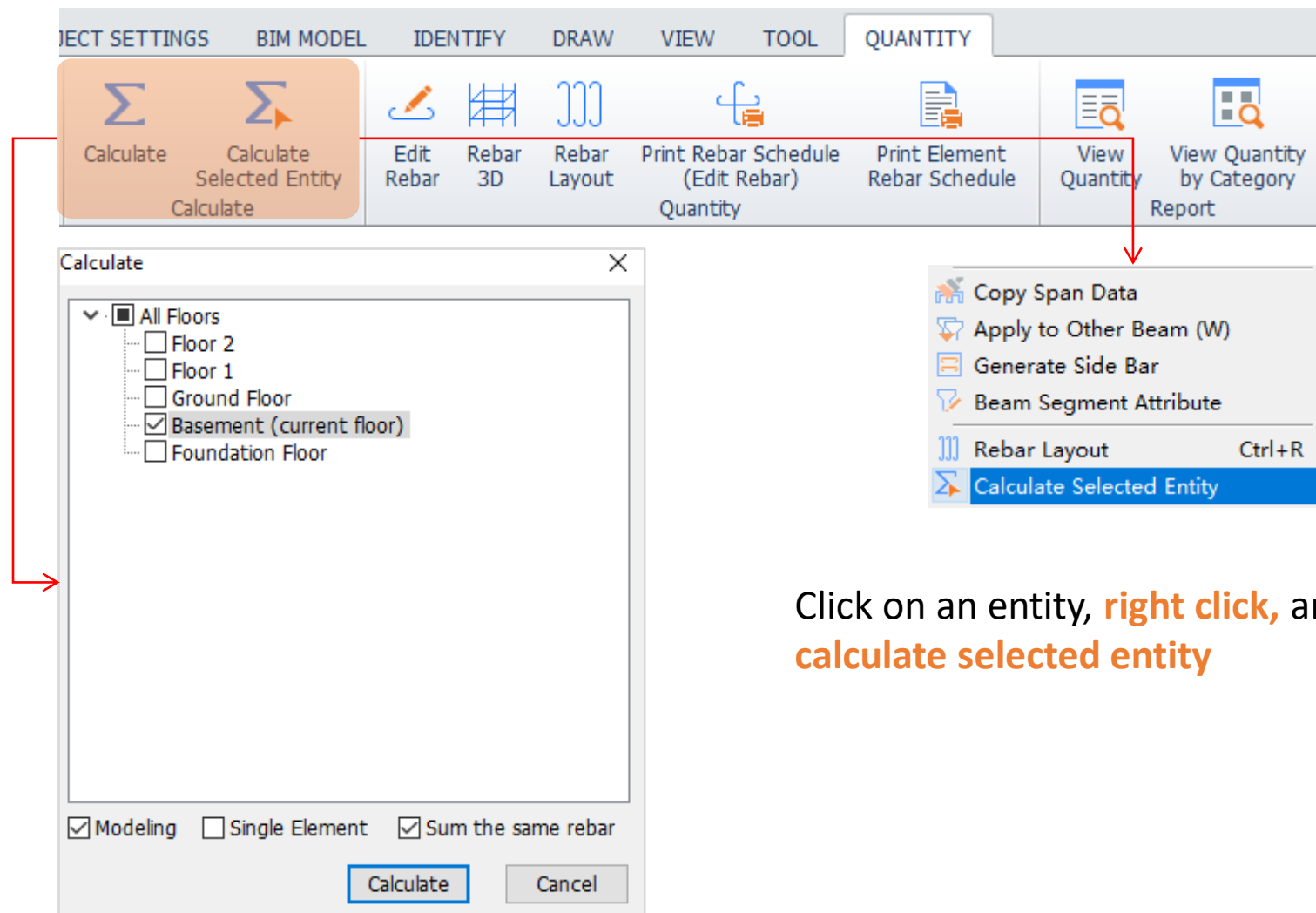
	Rebar	Strength	Diamete	Shape	Shape	Calculation Formula	Formula Description	Cutting-	Quar
1*	(1)	BJTD-40	12	32	3350 152 200 400 152	3350+400+200		3950	14
2	(2)	BJTD-40	12	103	200 630 200 94	630+200+200		1030	9

OST by GLodon



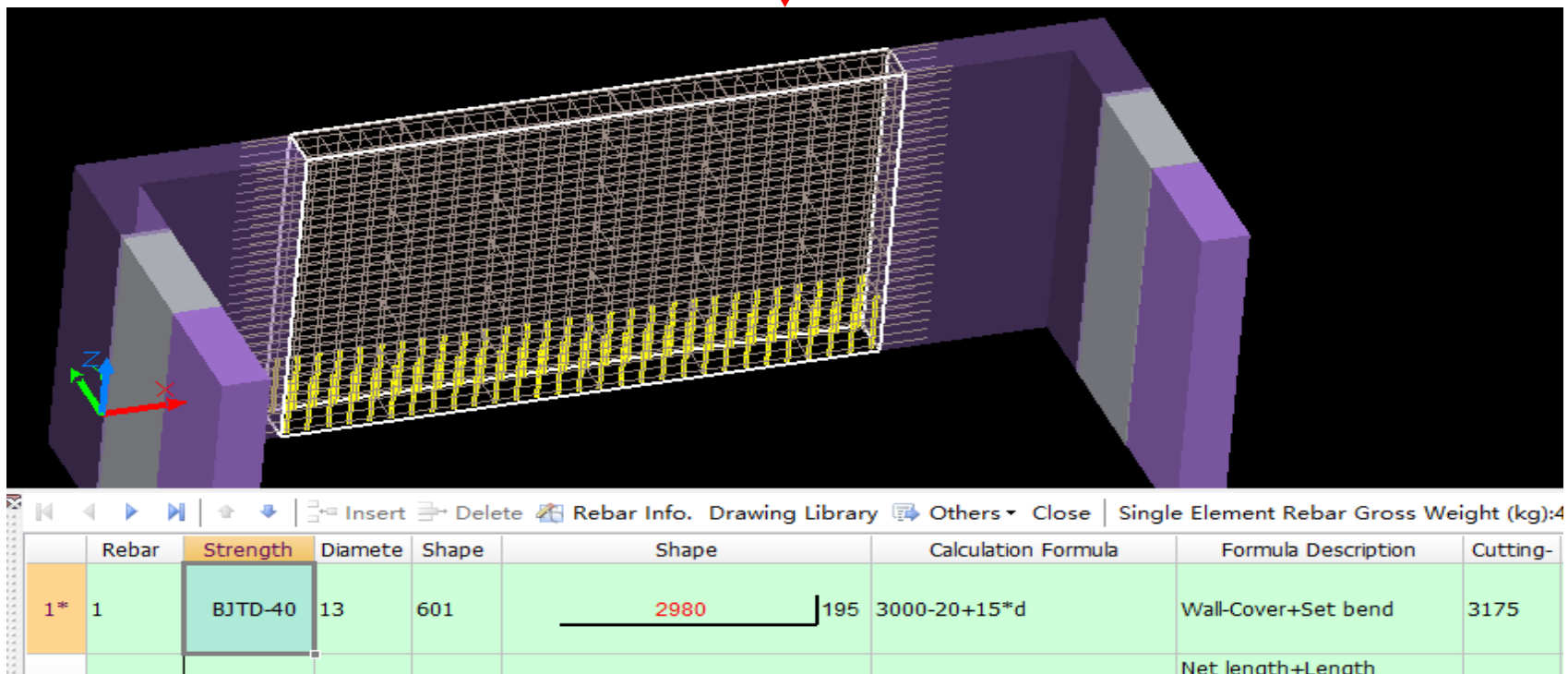
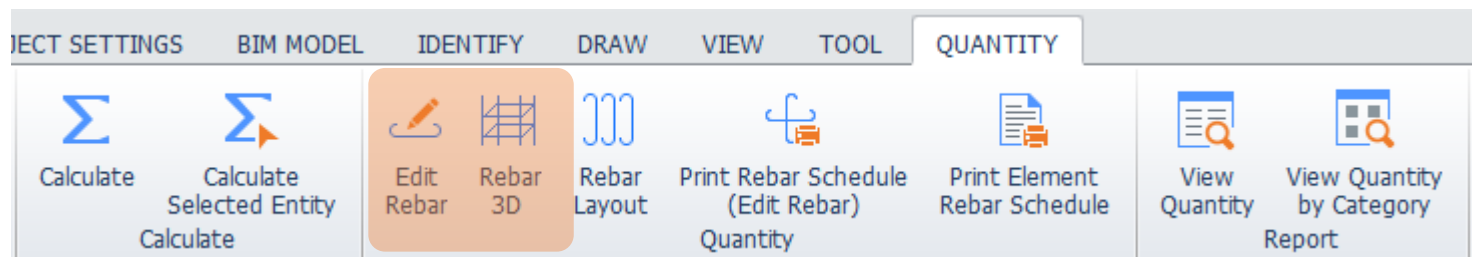
Quantity

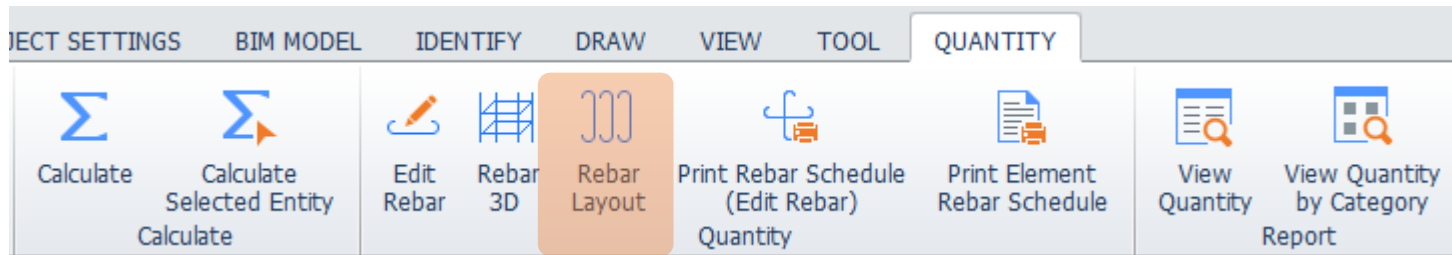




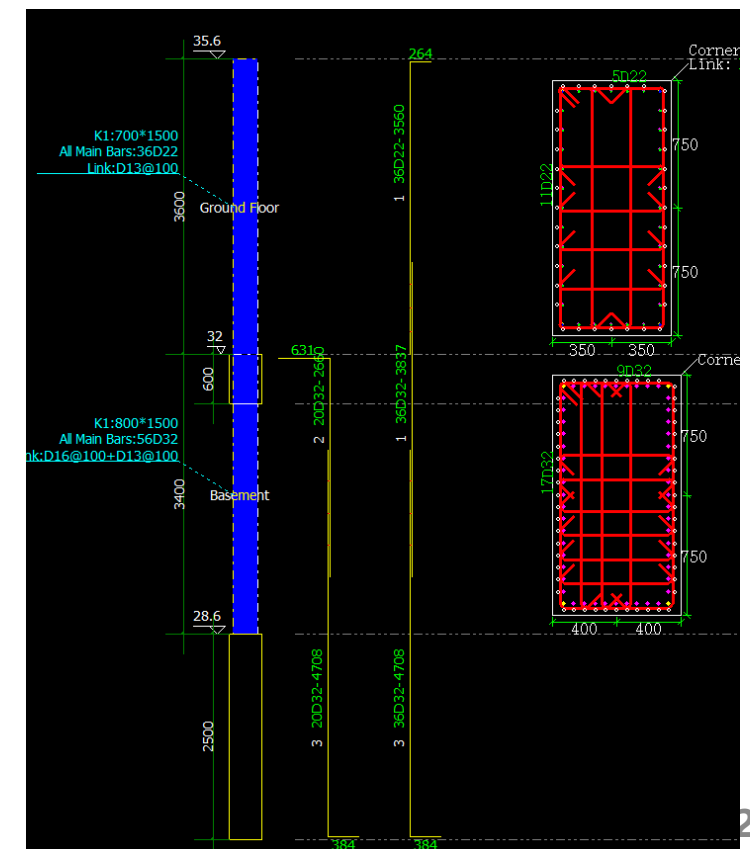
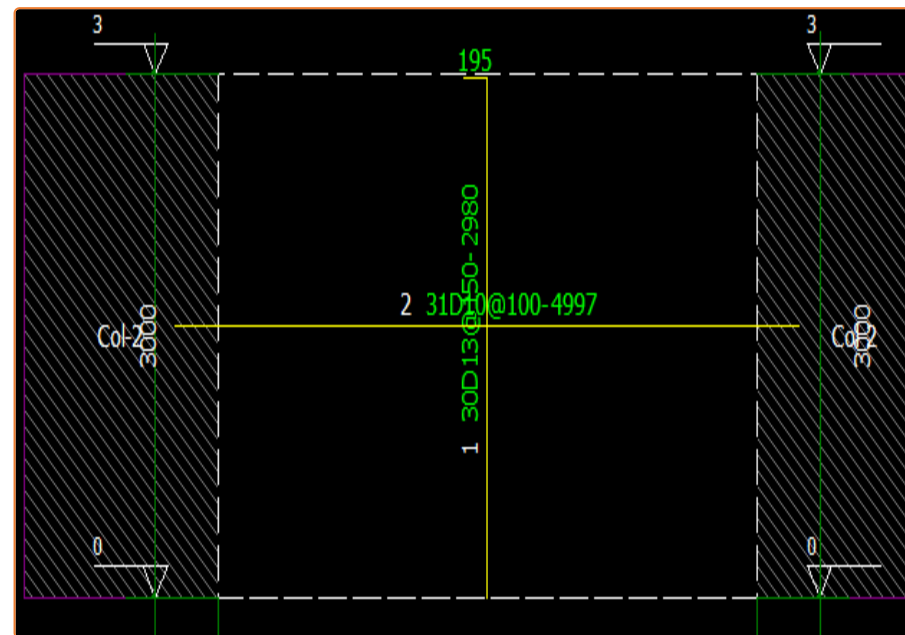
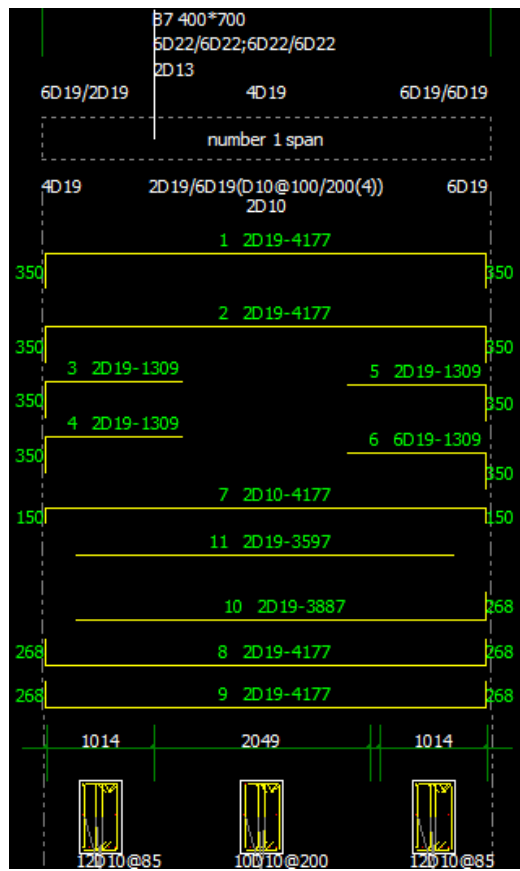
Click on an entity, **right click**, and select **calculate selected entity**

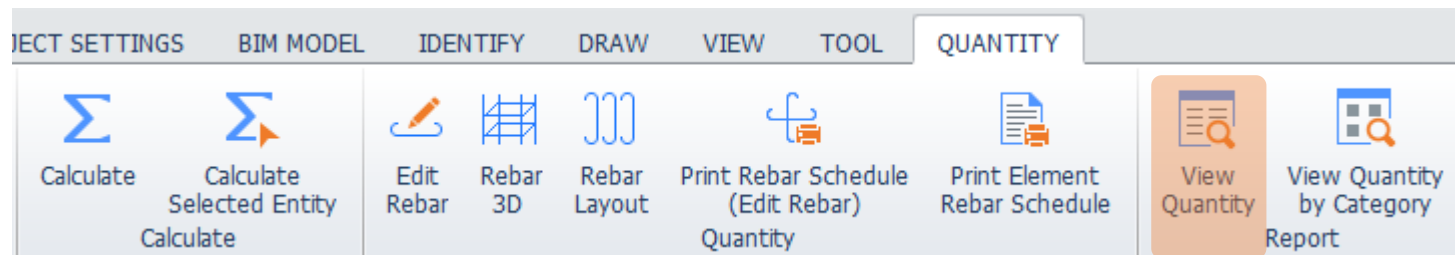
quantity function-**calculate**-Select floors-click calculate



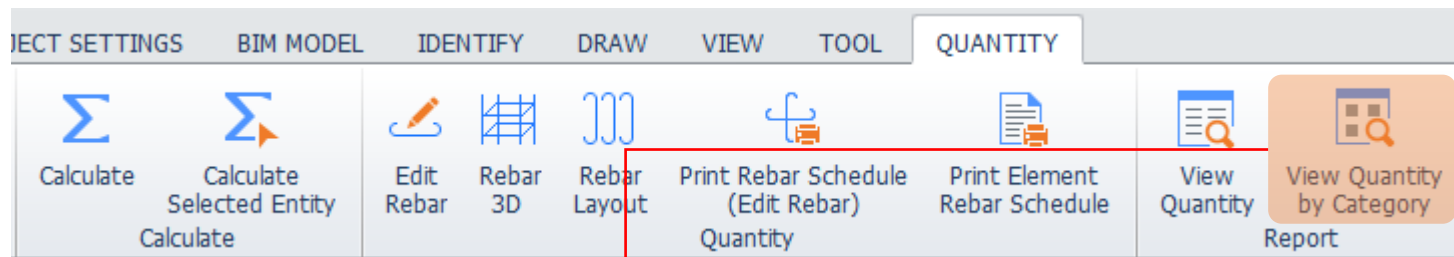


Click **Rebar Layout**, click the entity that already calculated





Common Rebar								
Rebar Gross Weight (kg): 656.093								
	Element Name	Rebar Gross Weight (kg)	BJTD-40					Total
			10	13	16	20	22	
1	B1[81]	167.004	64.659	11.807	38.042	52.497	0	167.004
2	Col-4[75]	163.029	9	0	0	0	154.03	163.029
3	Col-4[76]	163.029	9	0	0	0	154.03	163.029
4	Col-4[77]	163.029	9	0	0	0	154.03	163.029
5	Total	656.093	91.658	11.807	38.042	52.497	462.089	656.093



View Classification Summary Quantity

Range Settings **Set Classification Condition** Export ▾

Common Rebar

	Element Type	Floor	Rebar Strength	Rebar Quantity	
				10	13
1	Wall	Ground Floor	BJTD-40	332.56	304.66
2	Beam	Ground Floor	BJTD-40	140.544	315.848
3	Column	Ground Floor	BJTD-40	198.258	0
4	Total			671.362	620.508

☐ Show Subtotal
 ☐ Only show quantities of one typical floor
 ☐ Summarize link c

Set Classification Condition

Common Rebar

Element Type: All, Wall, Beam, Column

Attribute Name	Use Symbol
1 Zone	☐
2 Element Type	☒
3 Floor	☒
4 Summary Info	☐
5 Name	☐
6 Rebar Strength	☒
7 Rebar Classification	☐
8 Construction Zone	☐
9 Remarks	☐
10 Construction Phase	☐
11 Flow Zone	☐
12 Subcontractor	☐

Searching Range

- ☒ Main bar
- ☒ Dowel Bar
- ☒ U-shaped bar
- ☒ Link
- ☒ Spiral link
- ☒ Hook
- ☒ Auxiliary bar

☒ Summarize them into main bars, links and auxiliary bars

Move Up Move Down

Diameter Setting

Starting Diameter (Ending Diameter (

☒ Summarize by diameter

Note:
Summarize by diameter: Checking it will calculate and summarize rebar by diameter while unchecking will display only the total quantity. Given intervals of diameters, there will be groups of quantities summarized by these diameters.

New Delete

To Regenerate report

Step 1: Click [Set classification Condition]

Step 2: Tick attribute, move up/down

Various Type of Reports

Software interface showing the 'REPORT' tab and a list of reports.

REPORT

Set Range Custom Report Export Print Zoom In

Single Adaptive 83

Double Column width be adaptive to 1 Page

Indicator Reports

- Project Technical And Economic Indicators
- BQ Summary
- BQ Variation Summary
- Rebar Economic Indicators 1
- Rebar Economic Indicators 2
- Rebar Economic Indicators - By Floor
- Rebar Economic Indicators - By Position

Schedule

- Rebar Schedule**
- Rebar Shape Schedule
- Element Rebar Schedule - By Summary Info
- Element Rebar Schedule - By Floor

Summary Reports

- Rebar Statistic Summary
- Rebar Joint Summary
- Element Rebar Summary By Floor
- Rebar Summary By Element
- Rebar Summary By Strength And Diameter
- Rebar Summary By Element Info.
- Rebar Summary By Connection Type
- Auxiliary Bar Summary
- Planting Rebar Summary By Floor
- Embedded Rebar Summary By Floor
- Custom Element Summary
- Link Cage Summary
- Capping Summary

Custom Report

- Rebar Summary

Ground Floor

Modeling Single Element BQ Report

Rebar Schedule

Project Name: Project 1

Prepared On: 2021-05-16

Floor: Ground Floor (Modeling)						Total Weight: 3305.799 Kg			
Mark	Strength	Size	Rebar Shape	Formula	No. of Bars	Total No.	Length of Each Bar m	Total Length m	Total Weight kg

Element Rebar Schedule--By Summary Info. (contain auxiliary bar)

Project Name: Project 1

Prepared On: 2021-05-16

Element Rebar Schedule--By Floor (contain auxiliary bar)

Project Name: Project 1

Prepared On: 2021-05-16

Floor: Ground Floor (Modeling)						
Element	Total Bar Weight kg	Element	Element No.	Weight of Each kg	Total Weight of Each Element kg	Joint
Column	1221.13	Col-2	2	186.739	373.478	
		Col-3	2	179.282	358.565	
		Col-4	3	163.029	489.088	
Wall	637.22	W2	1	402.493	402.493	
		W2	1	124.642	124.642	
		W2	1	110.086	110.086	
Beam	1447.448	B1	1	167.004	167.004	
		B3C1	1	1015.808	1015.808	
		B7	1	264.636	264.636	

Unit: kg	
	22
305.22	1481.916
52.497	
	711.767
52.497	711.767
52.723	
	308.06
	462.089
52.723	770.149

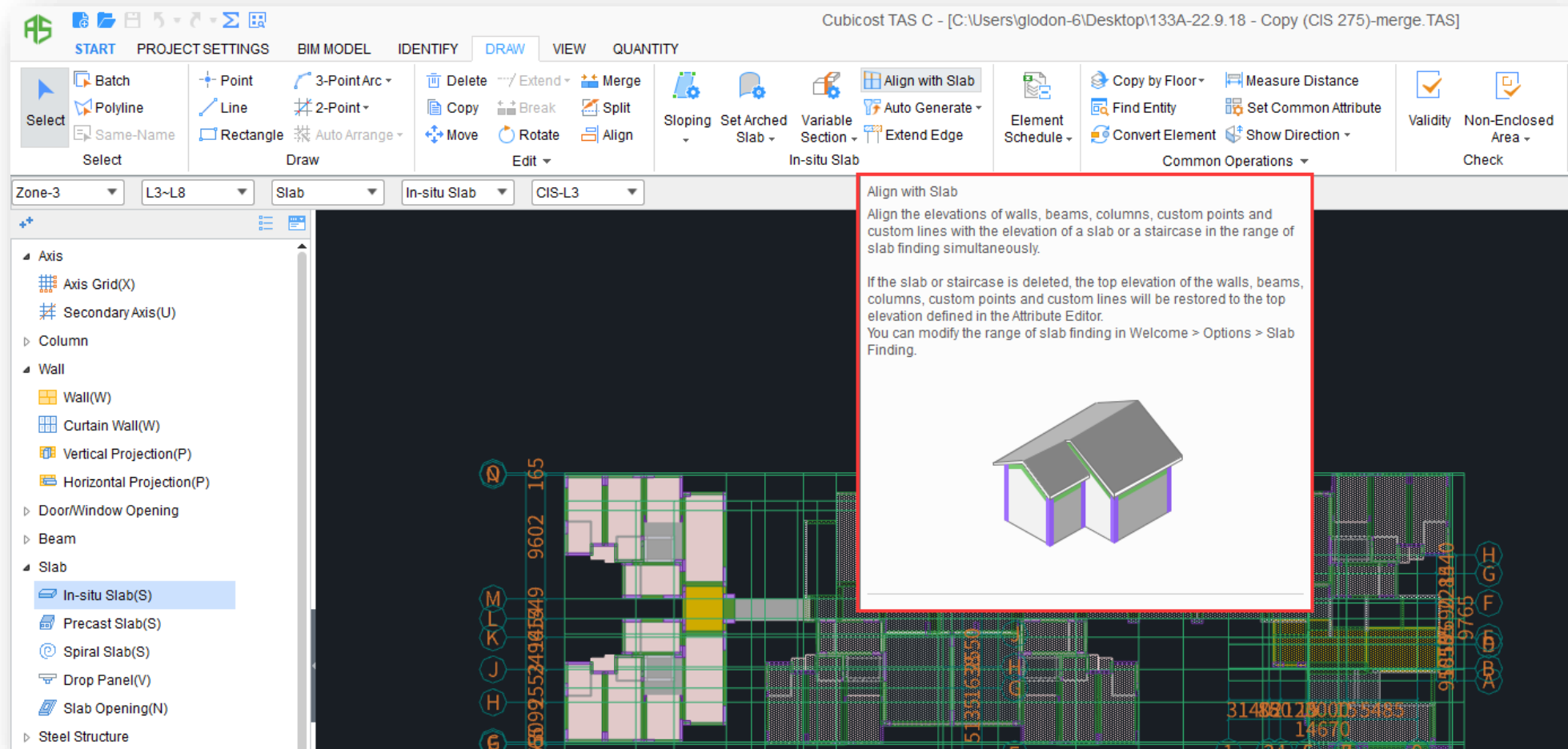
Shortcut Key

S/N	Element Type	Default Shortcut Key
1	Axis Grid	X
2	Beam	B
3	Blinding	X
4	Column	C
5	Ceiling Finish	E
6	Component	C
7	Door	D
8	Floor Finish	F
9	Heavy Excavation	H
10	In-Situ Slab	S
11	Lintel	L
12	Precast Slab	S
13	PPVC	P
14	Pile Cap	P
15	Room	R
16	Raft Foundation	M
17	Slab Opening	N
18	Staircase	F
19	Skirting	T
20	Suspended Ceiling	H
21	Unit Type	U
22	Wall	W
23	Window	D
24	Waterproof	P
25	Wall Finish	U

S/N	Function	Shortcut Key
1	Open Online Help	F1
2	Batch Select	F3
3	Change Insert Point	F4
4	Validity Check	F5
5	CAD Layer Display	F7
6	Calculation	F9
7	View Quantity	F10
8	View Expression	F11
9	Entity Display Setting	F12
10	3D View	Ctrl + 3
11	Full Screen	Ctrl + 5
12	Undo	Ctrl + Z
13	Create New Project	Ctrl + N
14	Save	Ctrl + S
15	Delete	Del
16	Element Entity Name Display	Shift + (Elem. Shortcut key)

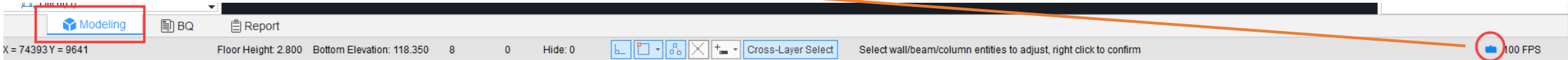
Function Tips

Move the cursor to the function and hint will be shown after 2 seconds.

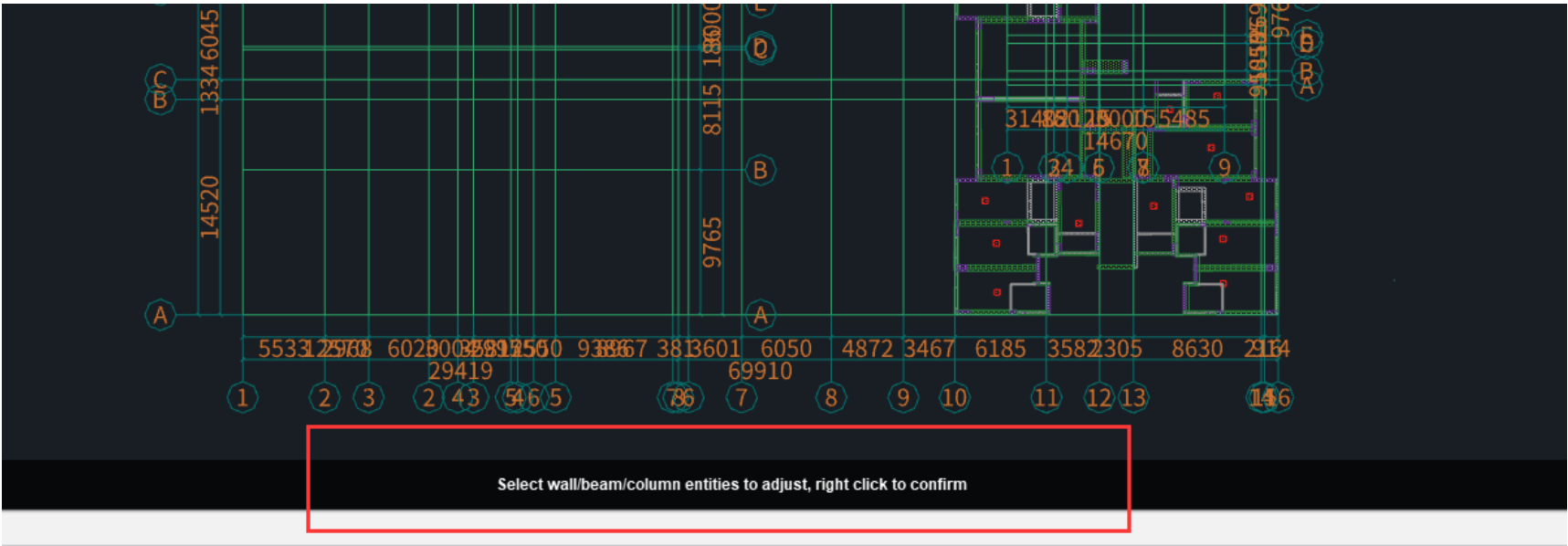


Step-by-step Tips

Click  at bottom Tool Bar



Guide step by step until complete the function



All the function are provide with Step-by-Step Tips

Help Video and Help Center

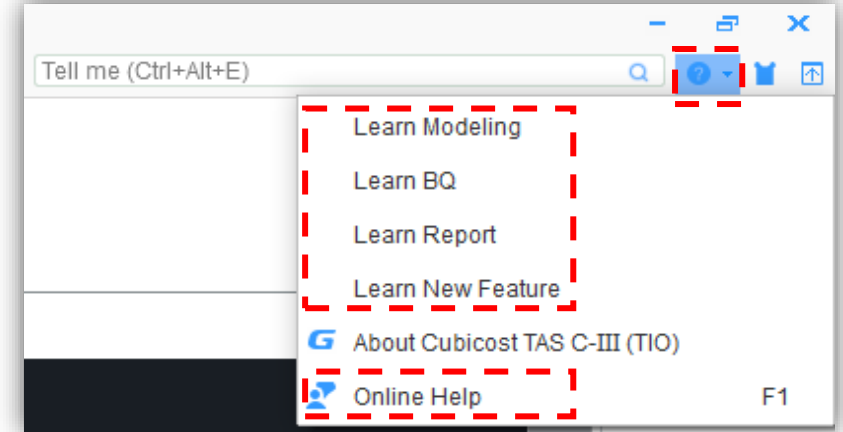
Click  on the top right corner to open learning centre and help centre

Learning Center is including:

- Learn Modeling
- Learn BQ
- Learn Report
- Learn New Feature

Help Center is:

- Online Help (F1)



Help Video and Help Center

Learn Modeling:

- Identify CAD
- Import BIM File
- Draw Models



Want to know how to build models?



Identify CAD

You can know how to build models by identifying drawings.

[Learn more](#)



Import BIM File

You can build models at top speed.

[Learn more](#)



Draw Models

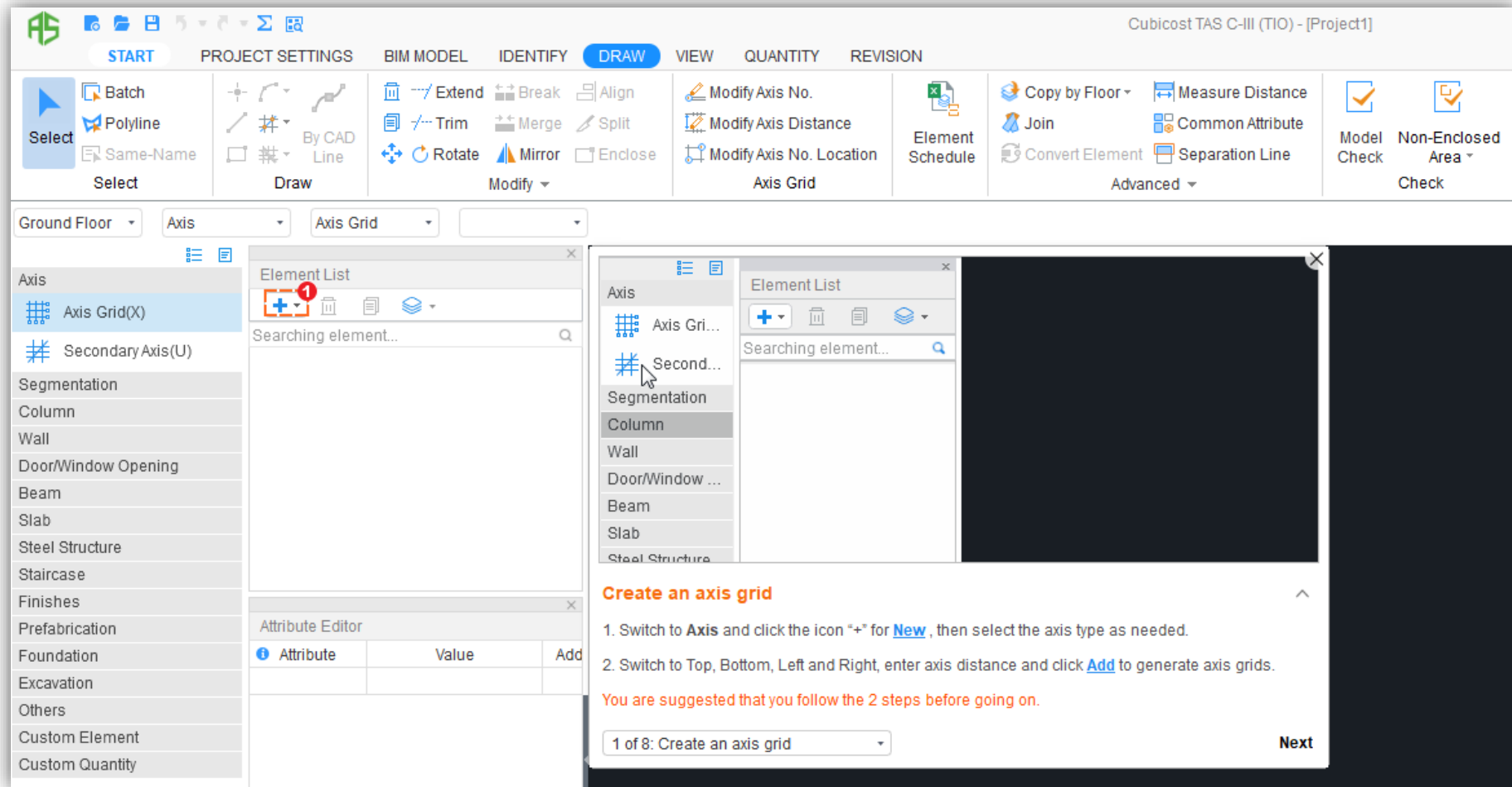
You can draw models for complicated elements.

[Learn more](#)

To learn TAS C features conveniently, please download our sample project drawings.

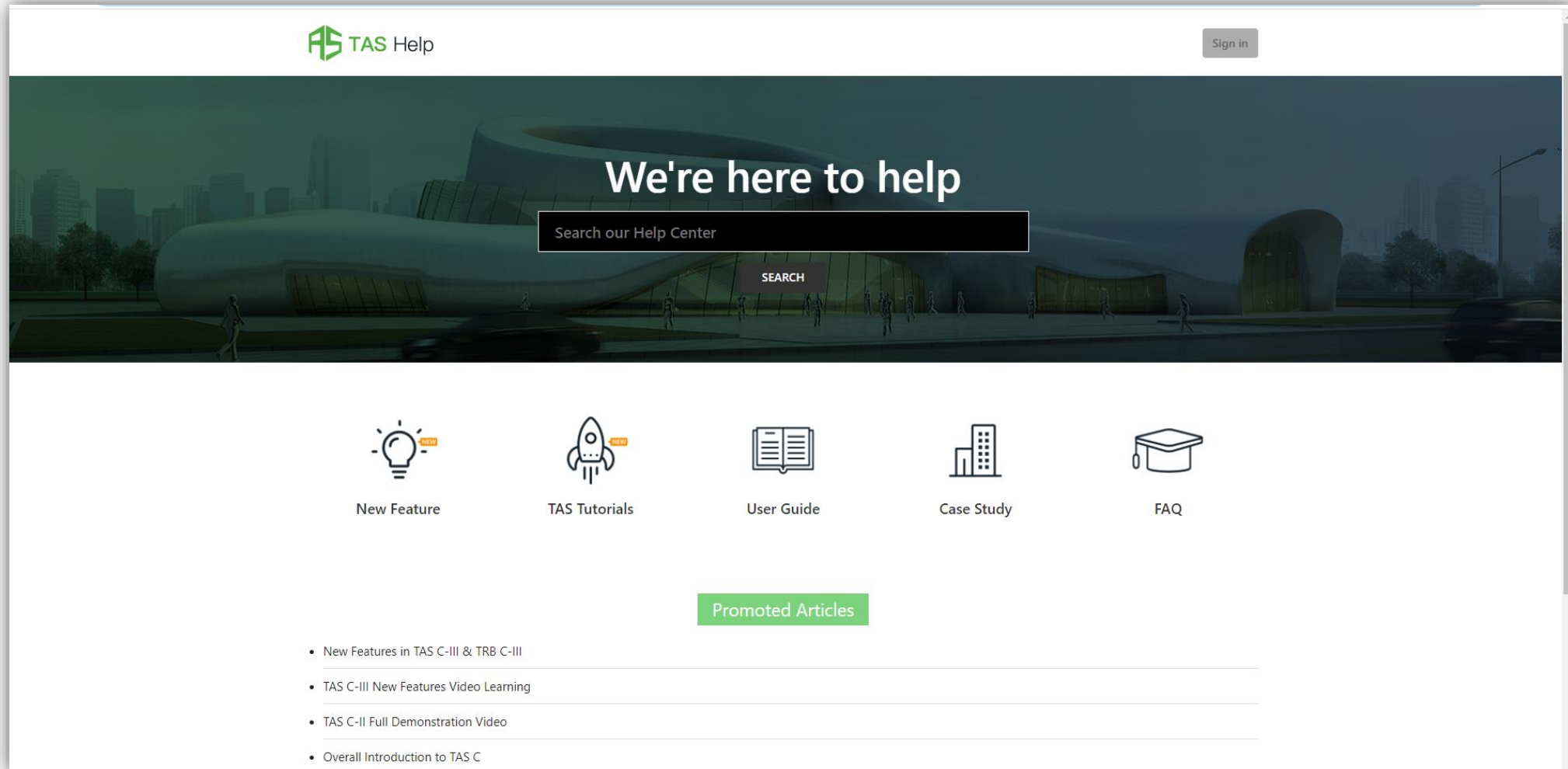
Help Video and Help Center

After Click “Learn More”, a guide video will come out and showing step by step for the modelling



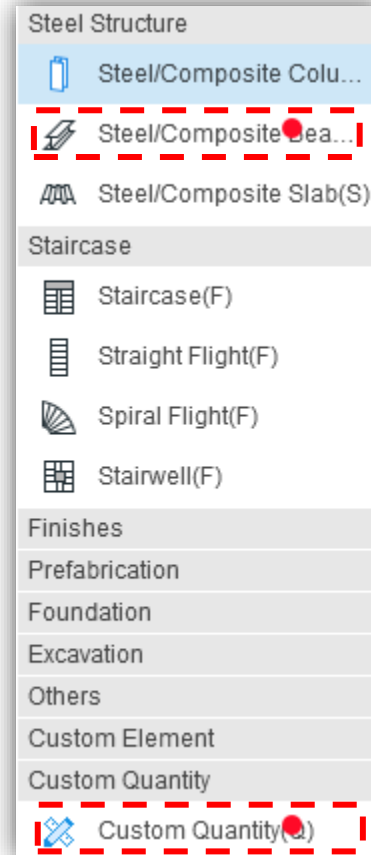
Help Video and Help Center

Click Online Help, the TASC helping website page will come out



Help Video and Help Center

- The red dot means here have an update in this version



Compatibility - Hardware

Suggested Computer Configurations for Cubicost TAS

Project	Starter	Cost-Effective	Large Project
Operating System	Windows 7 (64-bit) Windows 8/Windows 8.1 (64-bit) Windows 10 (64-bit)	Windows 7 (64-bit) Windows 8/Windows 8.1 (64-bit) Windows 10 (64-bit)	Windows 7 (64-bit) Windows 8/Windows 8.1 (64-bit) Windows 10 (64-bit)
Processor	Intel(R) Core(TM) i3 or higher	Intel(R) Core(TM) i5 or higher	Intel(R) Core(TM) i7 or higher
Installed Memory (RAM)	4 GB	8 GB	16 GB
Hardware	Desktop Computer: 10 GB or above Laptop Computer: 10 GB or above	Desktop Computer: 20 GB or above Laptop Computer: 20 GB or above	Desktop Computer: 20 GB or above Laptop Computer: 20 GB or above
Graphics Card	Independent Graphics Card: 512 MB or above	Independent Graphics Card: 1 GB or above	Independent Graphics Card: 2 GB or above
Display	Color Display: 32 bit color or above	Color Display: 32-bit color or above The dual-screen mode is recommended for high efficiency. Resolution: 1920 x 1280	Color Display: 32-bit color or above The dual-screen mode is recommended for high efficiency. Resolution: 1920 x 1280
Limitation	Import IFC/CAD/PDF functions are not recommended.	No limitation.	No limitation.
Recommended Project Scale	Low-rise buildings, multiple-floor buildings or small-scale projects	Medium-rise and high-rise buildings, medium-scale projects	Super high-rise buildings, large-scale projects

GLODON CUSTOMER SERVICE

Global Customer Service Supervision Hotline: **+62-812-5000-4131**



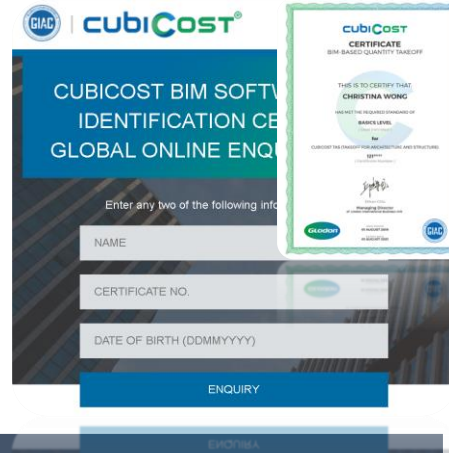
Installation & Maintenance

- Software Installation in Server or User PC
- License Activation
- New Version Updates & Release



Software Training

- Basic Training 3 days



E-Certification

- Provide Four Levels cert.
- Online Inquiry System
- Glodon Global Certification



Project Guidance

- On-site Project Guidance (Actual Project)



Technical Support

- Live Assistant Via Tools
- Off-site Service (Hot line, Email, TeamViewer, etc.)
- Technical Visit

9.0 How to download your E-Certificate

Step 1: Access to Cubicost.glodonedu.com or scan the below QR Code

