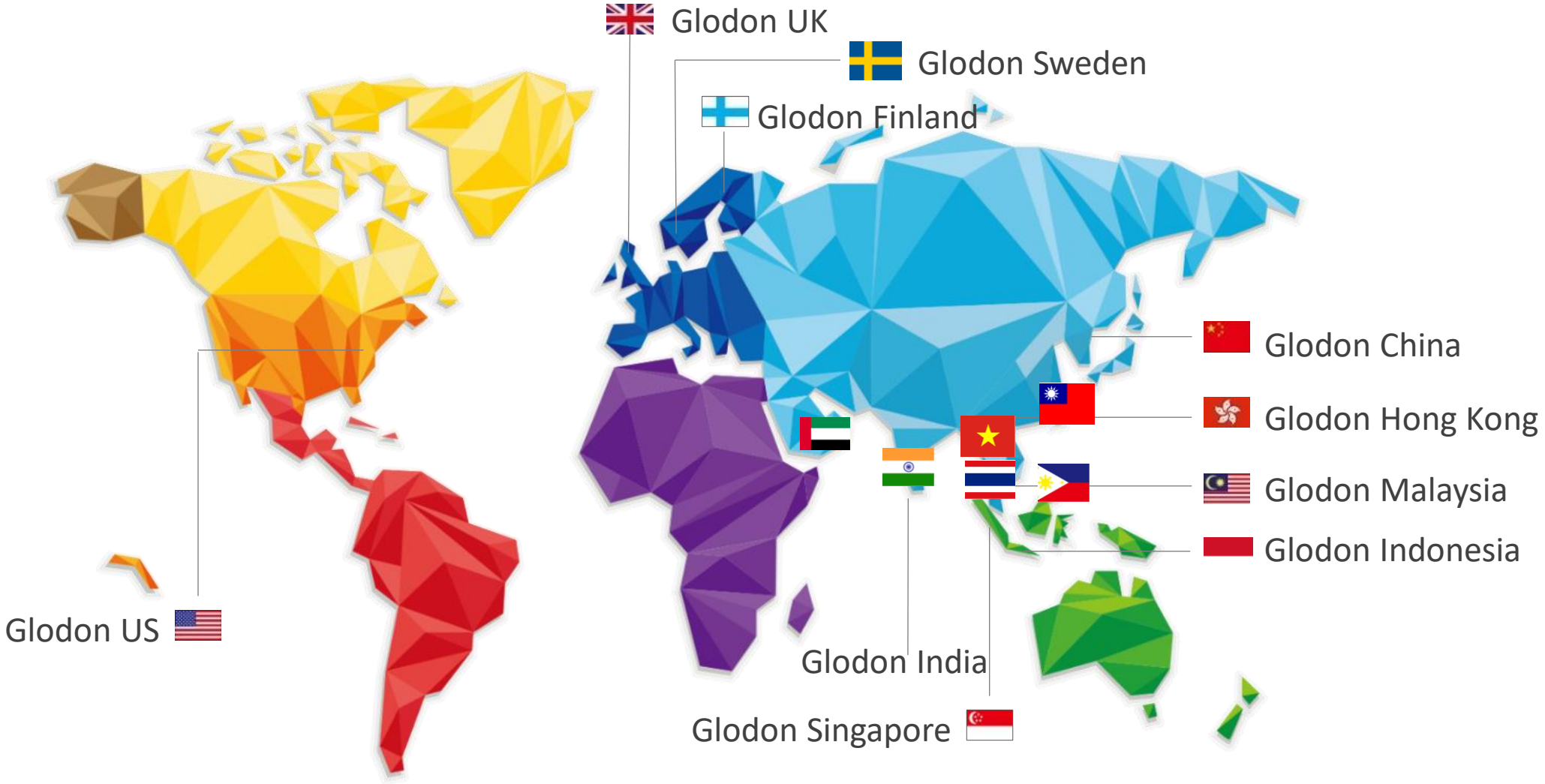
Company Overview

- **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

cubiCost by Glodon

Globalized Layout



cubiCost by Glodon

Cubicost Product

CUBICOST TAS

CUBICOST TRB

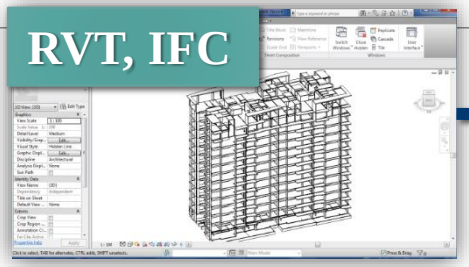
CUBICOST TME

CUBICOST TBQ

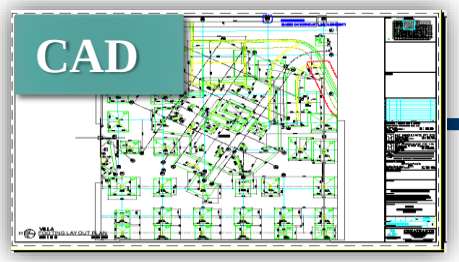
Easy Step

Input drawing → **Identify / Tracing** → **Calculate**

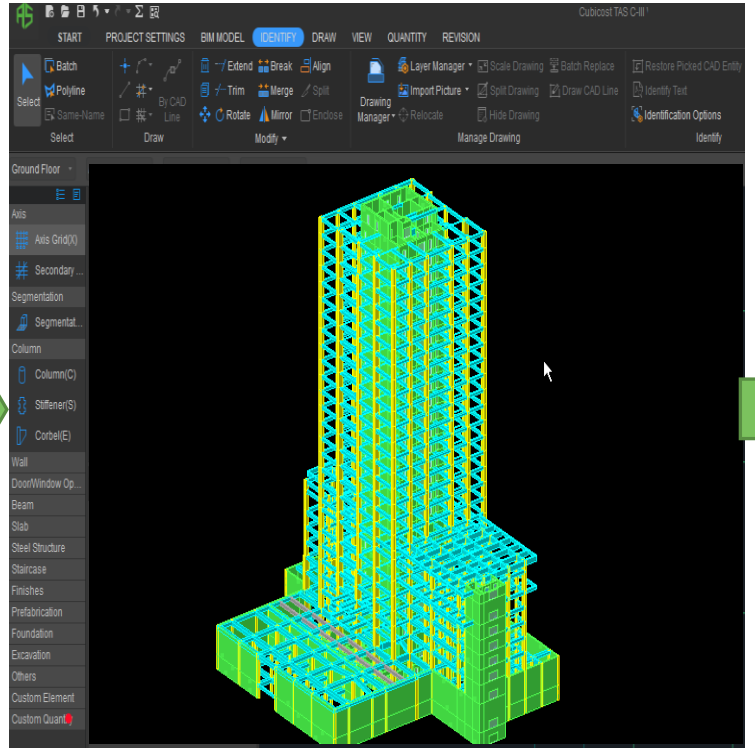
RVT, IFC



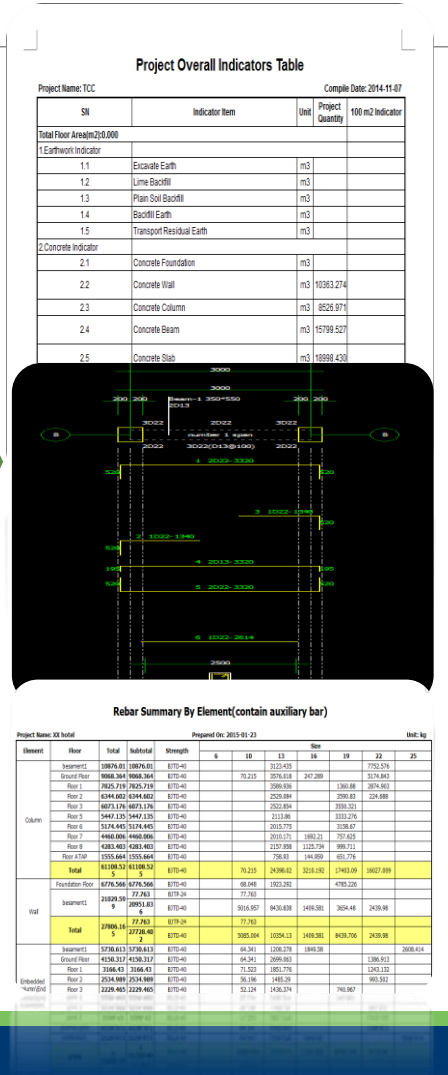
CAD



PDF, JPEG



TRB, TAS, TBQ



Project Overall Indicators Table

Project Name: TCC — Compile Date: 2014-11-07

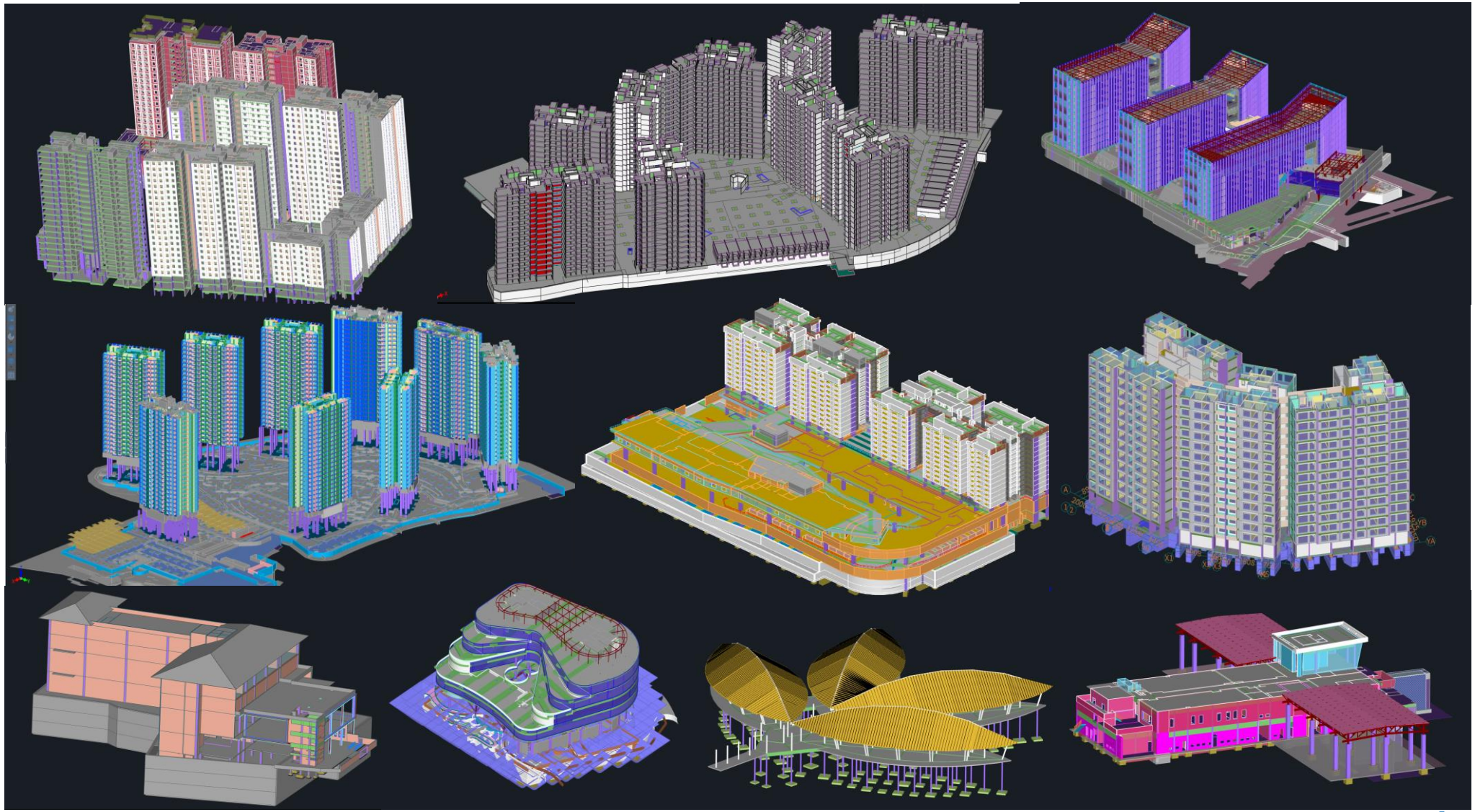
SN	Indicator Item	Unit	Project Quantity	100 m2 Indicator
Total Floor Area(m2):0.000				
1 Earthwork Indicator				
1.1	Excavate Earth	m3		
1.2	Lime Backfill	m3		
1.3	Plain Soil Backfill	m3		
1.4	Backfill Earth	m3		
1.5	Transport Residual Earth	m3		
2 Concrete Indicator				
2.1	Concrete Foundation	m3		
2.2	Concrete Wall	m3	10363.274	
2.3	Concrete Column	m3	8526.971	
2.4	Concrete Beam	m3	15799.527	
2.5	Concrete Slab	m3	18998.430	

Rebar Summary By Element(contain auxiliary bar)

Project Name: XX hotel — Prepared On: 2015-01-23 — Unit: kg

Element	Floor	Total	Subtotal	Strength	Size 6	10	13	16	19	22	25
Column	basement1	10876.01	10876.01	B/TD-40			3123.435			7752.576	
	Ground Floor	9068.364	9068.364	B/TD-40		70.215	3576.818	247.289		5174.843	
	Floor 1	7025.719	7025.719	B/TD-40			2586.938		1360.88	2874.943	
	Floor 2	6344.602	6344.602	B/TD-40			2529.884		2590.83	224.688	
	Floor 3	6073.176	6073.176	B/TD-40			2522.854		3330.321		
	Floor 5	5447.135	5447.135	B/TD-40			2113.86		3333.276		
	Floor 6	5174.445	5174.445	B/TD-40			2015.775		3138.67		
	Floor 7	4460.006	4460.006	B/TD-40			2010.171	1692.21	757.625		
	Floor 9	4283.403	4283.403	B/TD-40			2157.958	1125.734	999.711		
	Floor A750	1555.664	1555.664	B/TD-40			796.83	144.959	651.776		
	Total	61100.53 5	61100.53 5	B/TD-40		70.215	24396.82	3216.192	17403.09	19027.899	
Wall	Foundation Floor	6776.566	6776.566	B/TD-40		68.048	1923.282		4785.226		
	basement1	21029.39 9	77.763	B/TP-24		77.763					
			20951.63 6	B/TD-40		5016.957	8430.838	1499.581	3654.48	2439.98	
	Total	27806.16 5	77.763	B/TP-24		77.763					
			27728.40 2	B/TD-40		5085.004	10354.13	1499.581	8439.706	2439.98	
Embedded Cumm/End	basement1	5730.613	5730.613	B/TD-40		64.341	1208.278	1840.58			2608.414
	Ground Floor	4150.317	4150.317	B/TD-40		64.341	2699.863			1386.913	
	Floor 1	3166.43	3166.43	B/TD-40		71.523	1851.776			1243.132	
	Floor 2	2534.989	2534.989	B/TD-40		56.196	1485.29			993.502	
	Floor 3	2229.465	2229.465	B/TD-40		52.124	1436.374			740.967	

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

cubiCOST by Glodon

cubiCost

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.

cubiCost

CERTIFICATE

BIM-BASED QUANTITY TAKEOFF

THIS IS TO CERTIFY THAT:

CHRISTINA WONG

HAS MET THE REQUIRED STANDARD OF

BASICS LEVEL

(Level indicated)

for

CUBICOST TAS (TAKEOFF FOR ARCHITECTURE AND STRUCTURE)

TB48BC729

(Certificate Number)

Ethan Chiu

Managing Director

of International Business Development Department

Glodon

DATE ISSUED
01 AUGUST 2019

EXPIRY DATE
01 AUGUST 2021

GIAC

Training Certificate

don 广联达

Training Materials

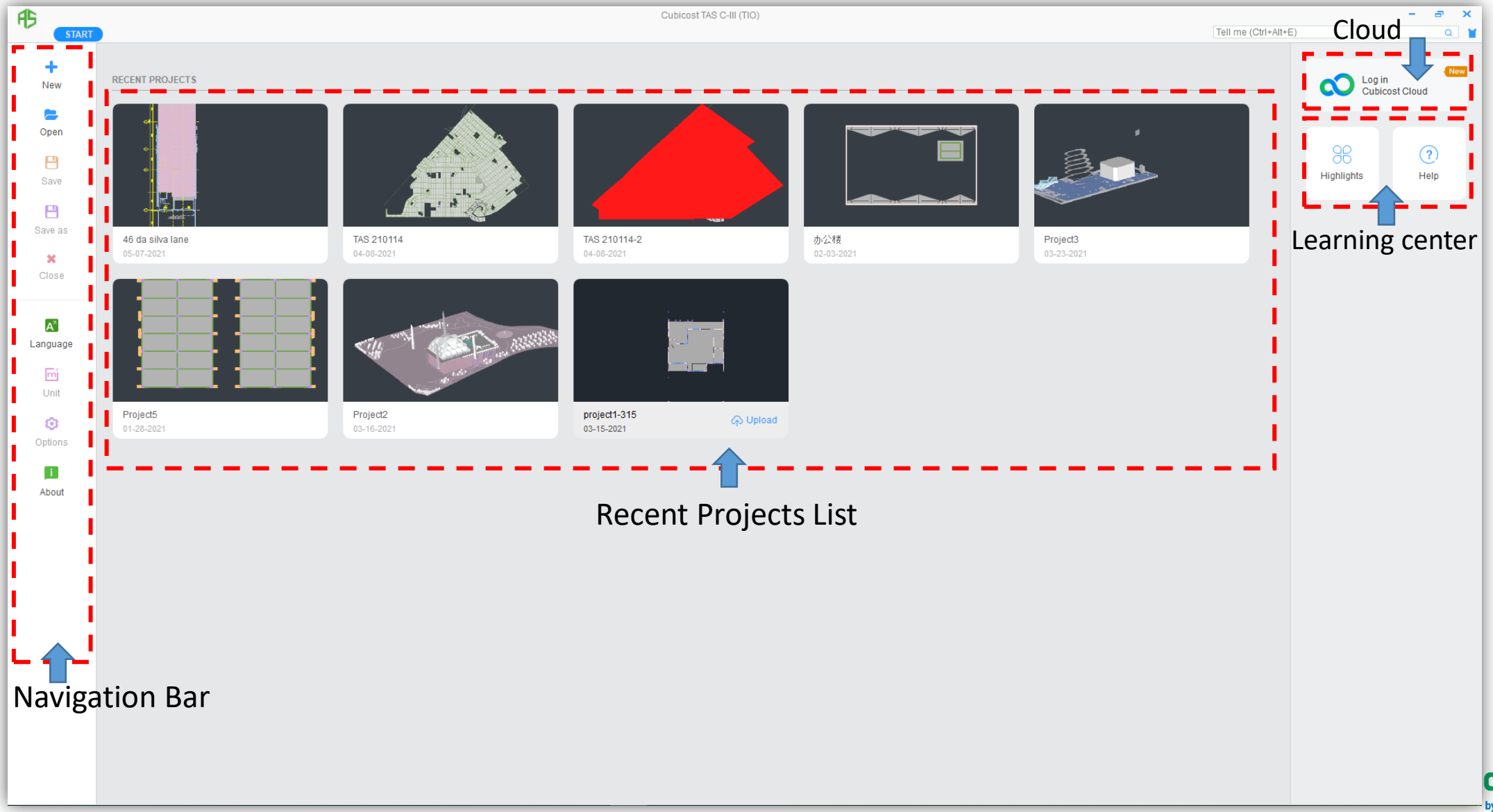
Training Slides & Drawings

bit.ly/basictrainingglodon

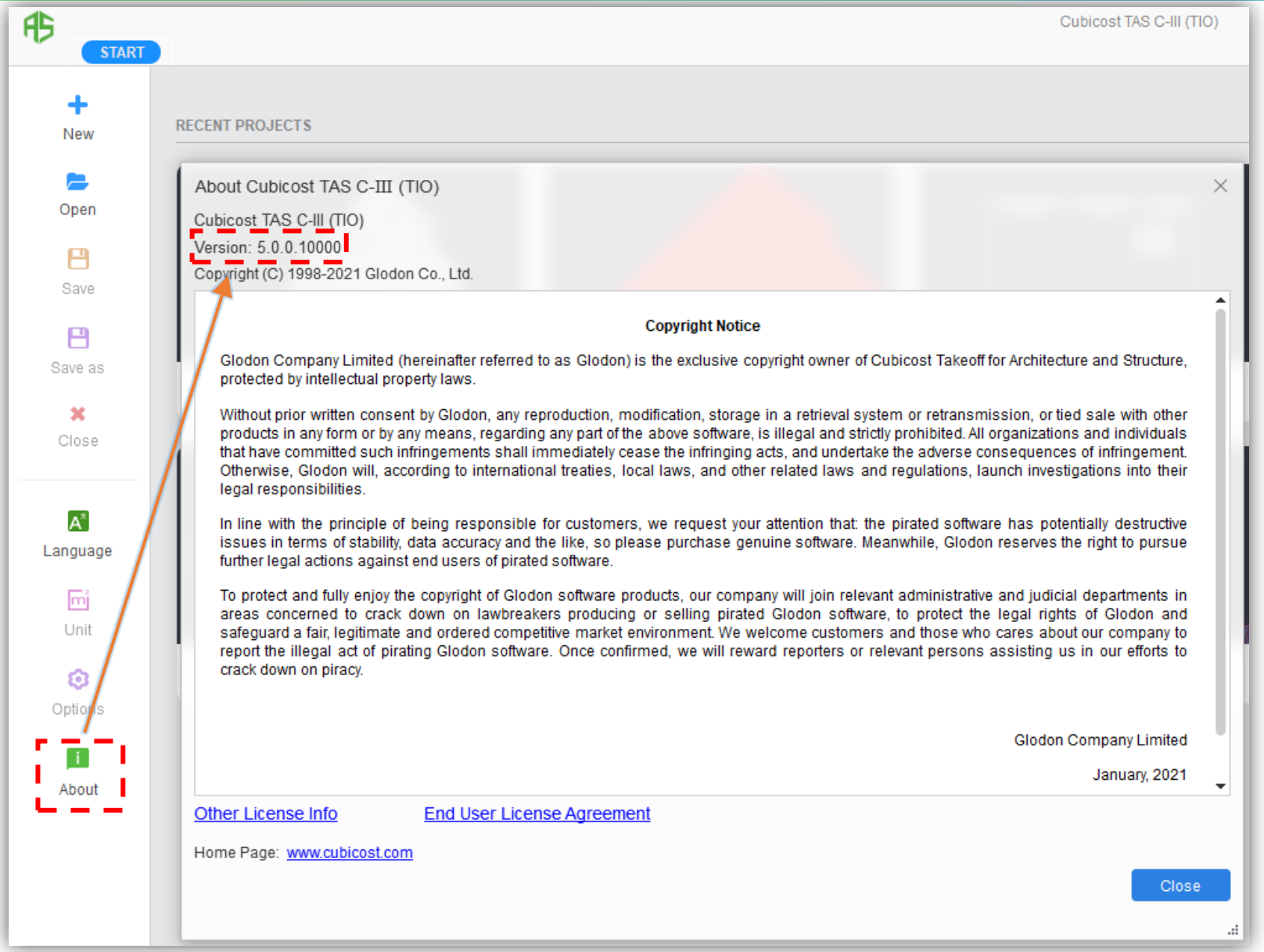
E-learning Platform

glodon-trainings.teachable.com/p/id

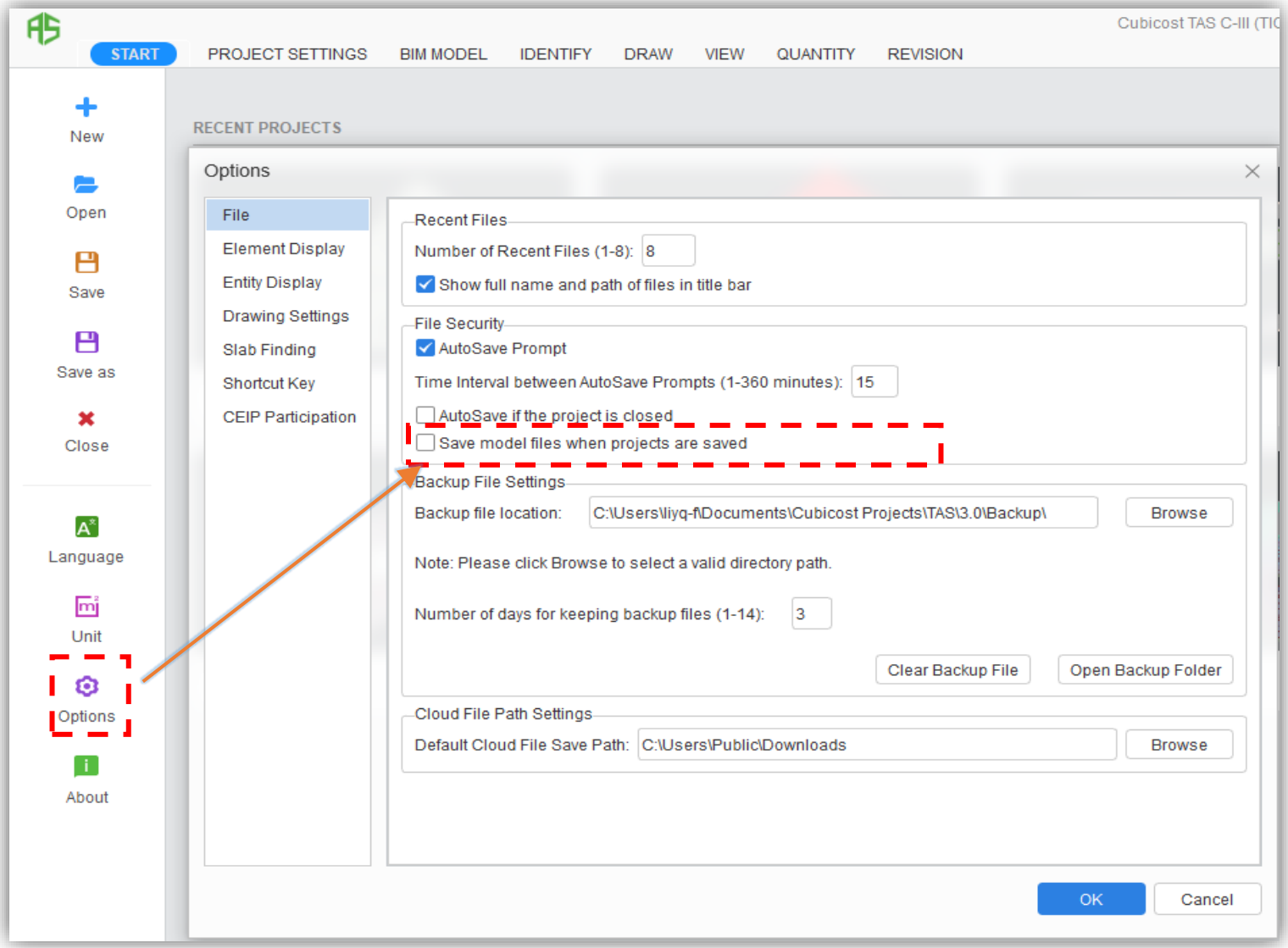
0.0 Welcome Interface



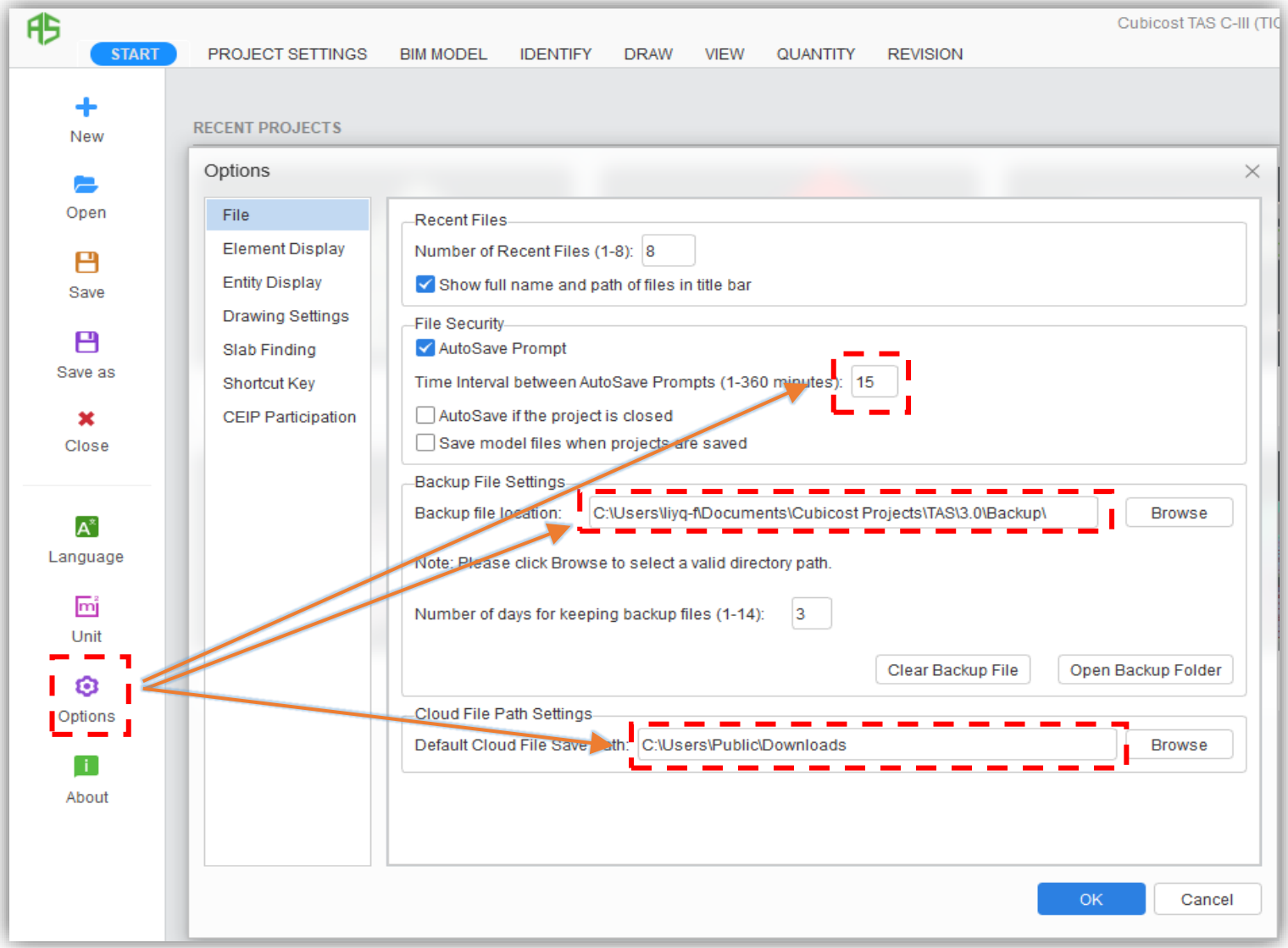
0.0 Welcome Interface



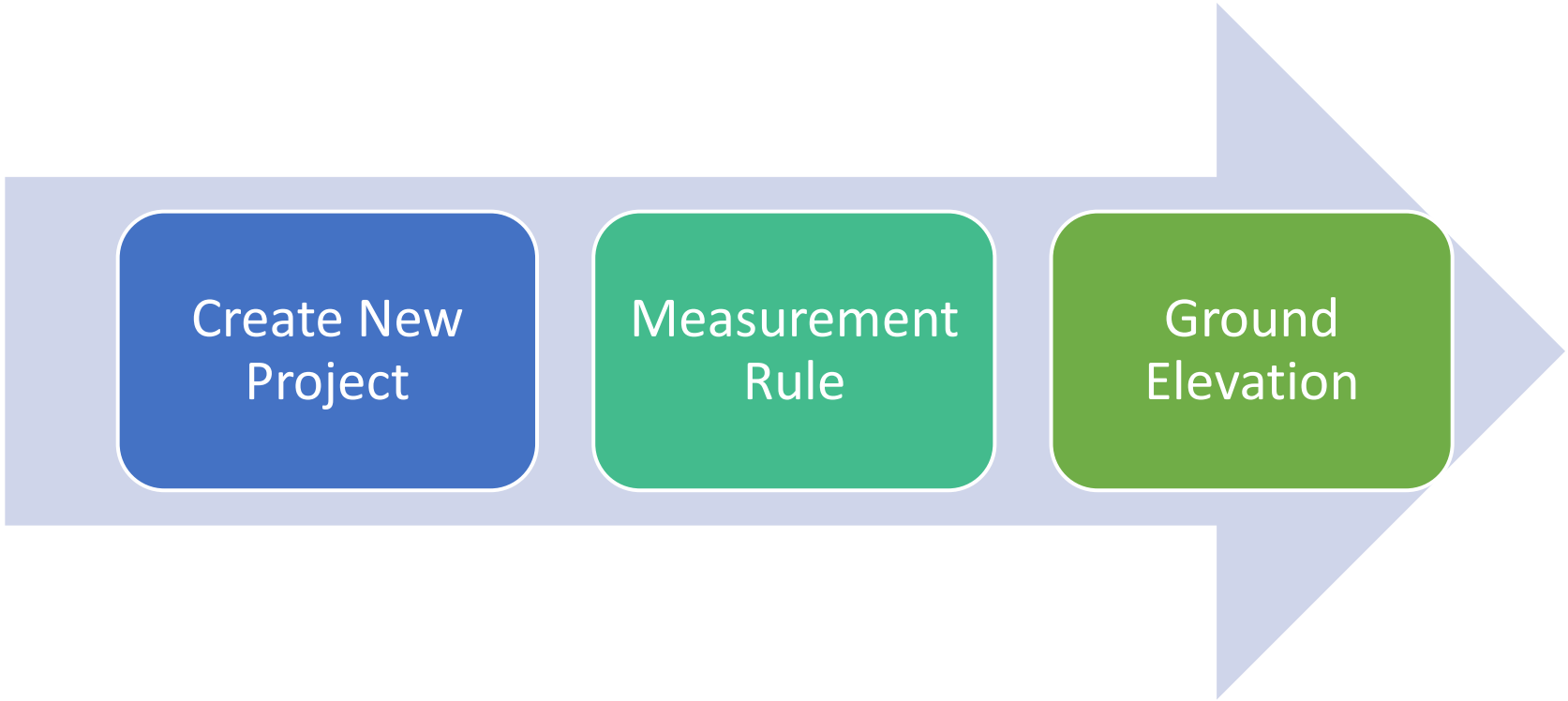
0.0 Welcome Interface



0.0 Welcome Interface

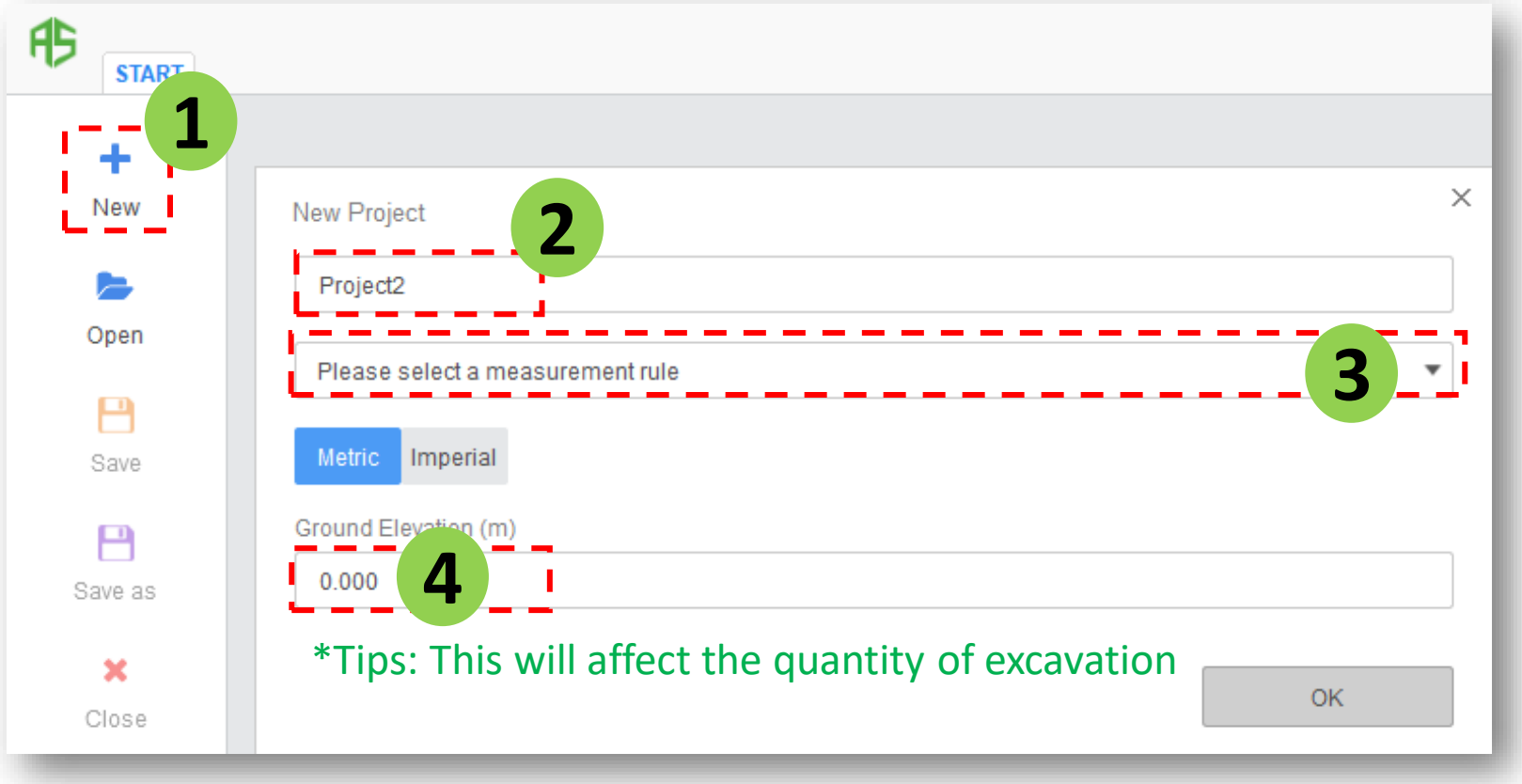


1.0 Create Project

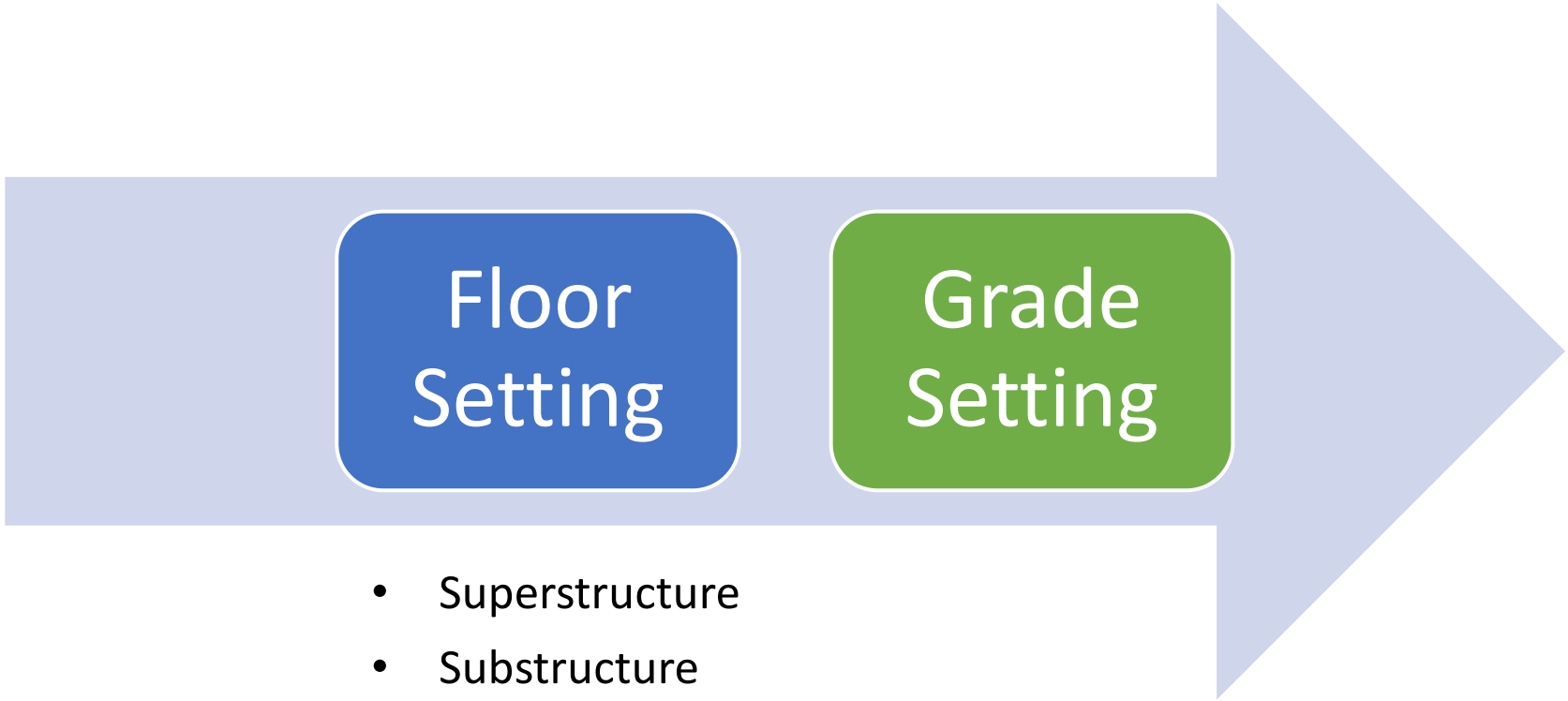


1.0a Create New Project

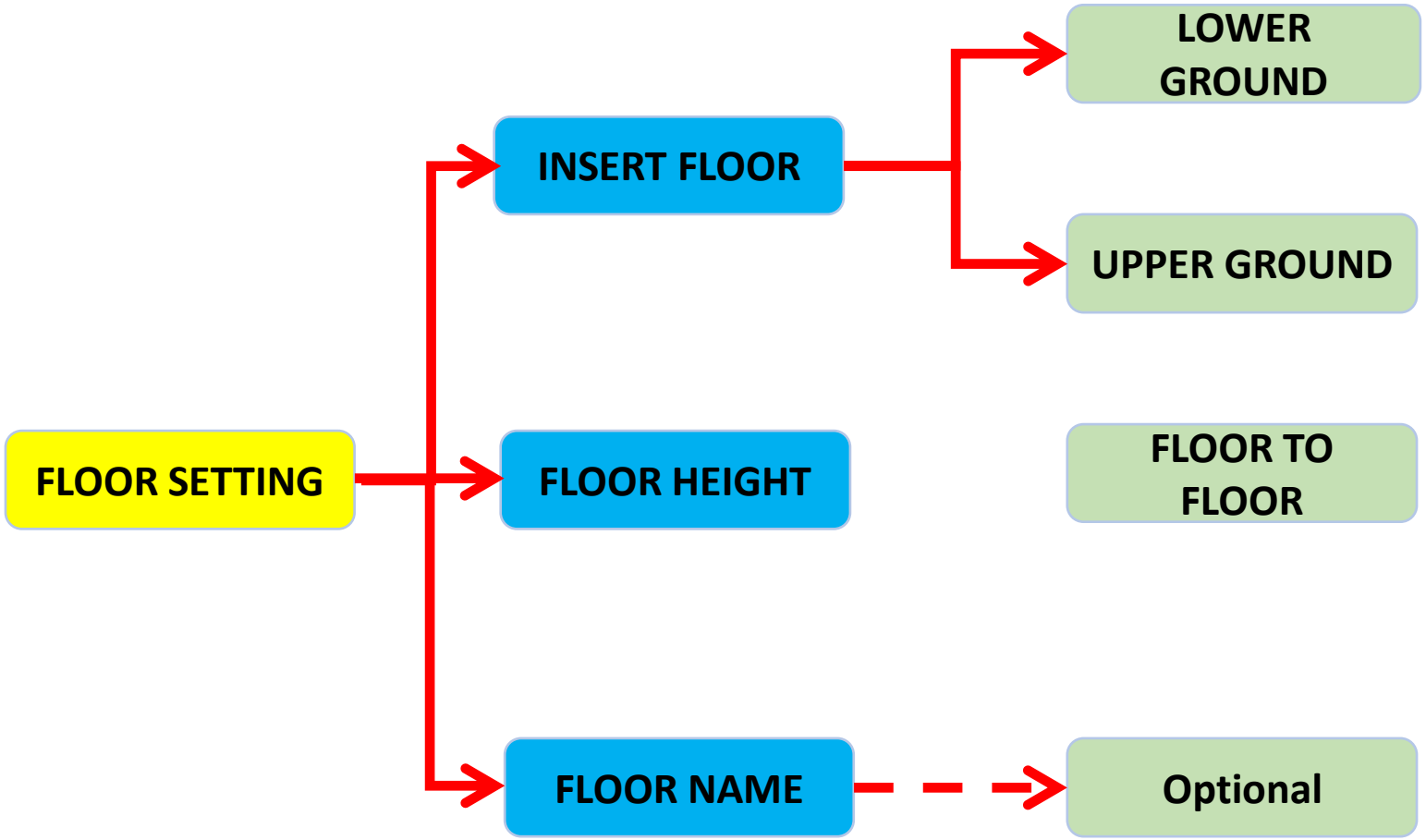
- Step 1: Create a [New] Project
- Step 2: Input Project Title
- Step 3: Select [Measurement Rules]
- Step 4: Input Existing Ground Level



2.0 Project Setting

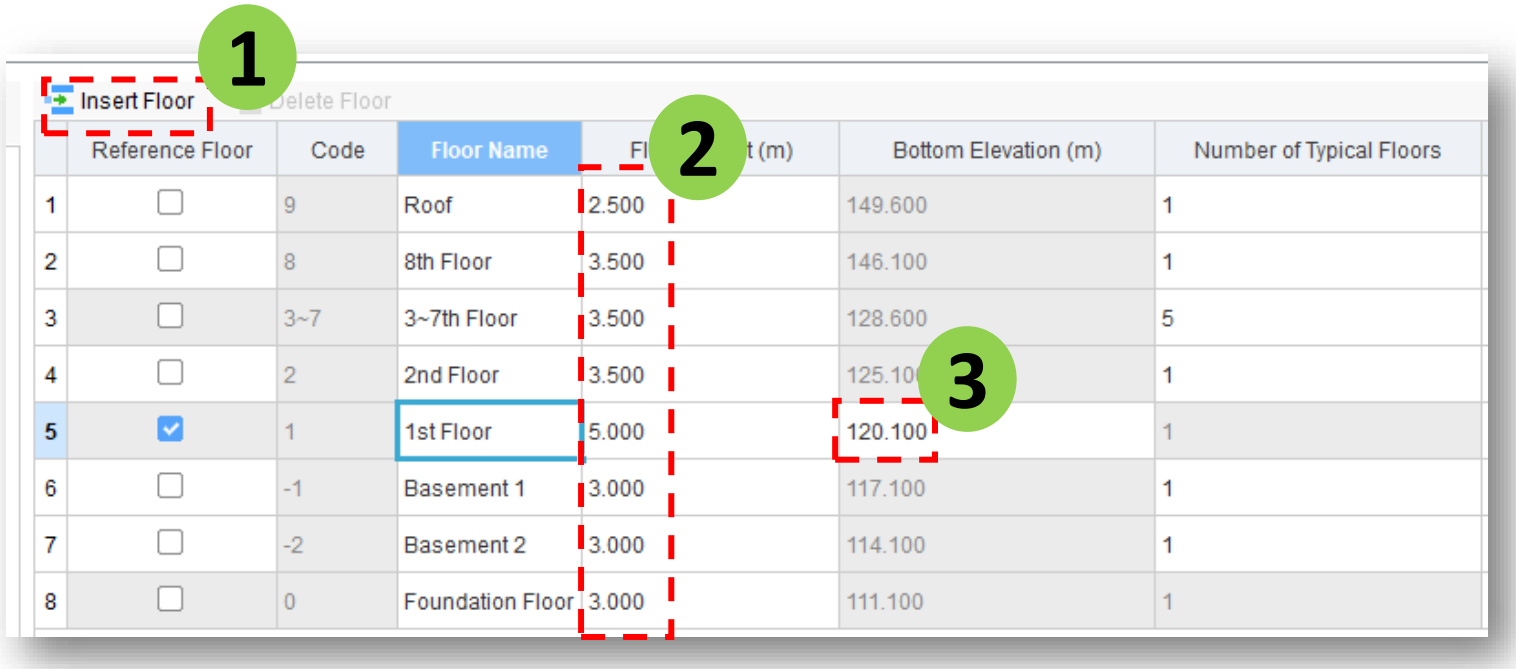


- Superstructure
- Substructure


FLOOR SETTING
INSERT FLOOR
FLOOR HEIGHT
FLOOR NAME
LOWER GROUND
UPPER GROUND
FLOOR TO FLOOR
Optional

2.0b Floor Setting

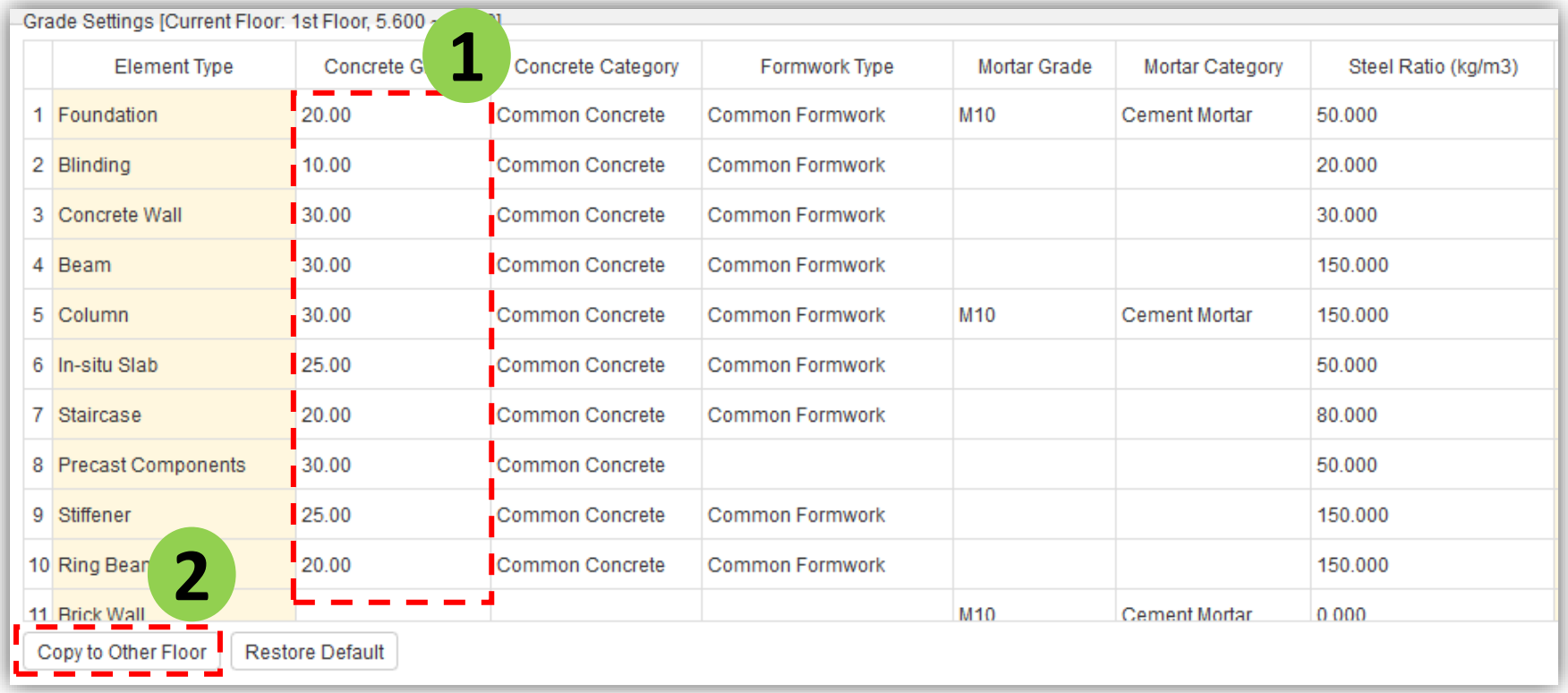
- Step 1: (a) Select at 1st Floor and [Insert Floor] for superstructure
  (b) Select at Foundation Floor and [Insert Floor] for substructure
- Step 2: Input [Floor Height] of every floors
- Step 3: Input the [Bottom Elevation] of 1st Floor ONLY



	Reference Floor	Code	Floor Name	Fl	t (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		125.10	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

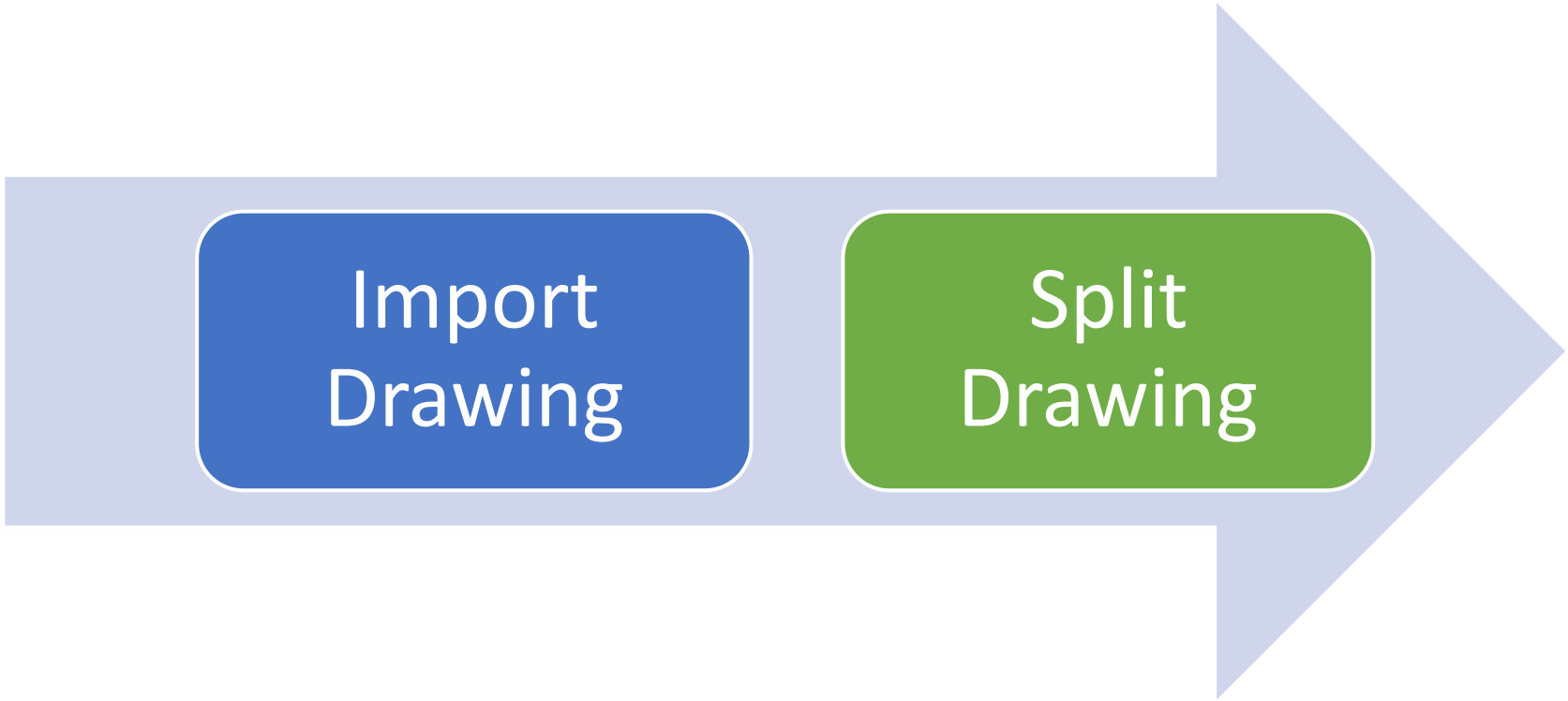
2.0c Grade Setting

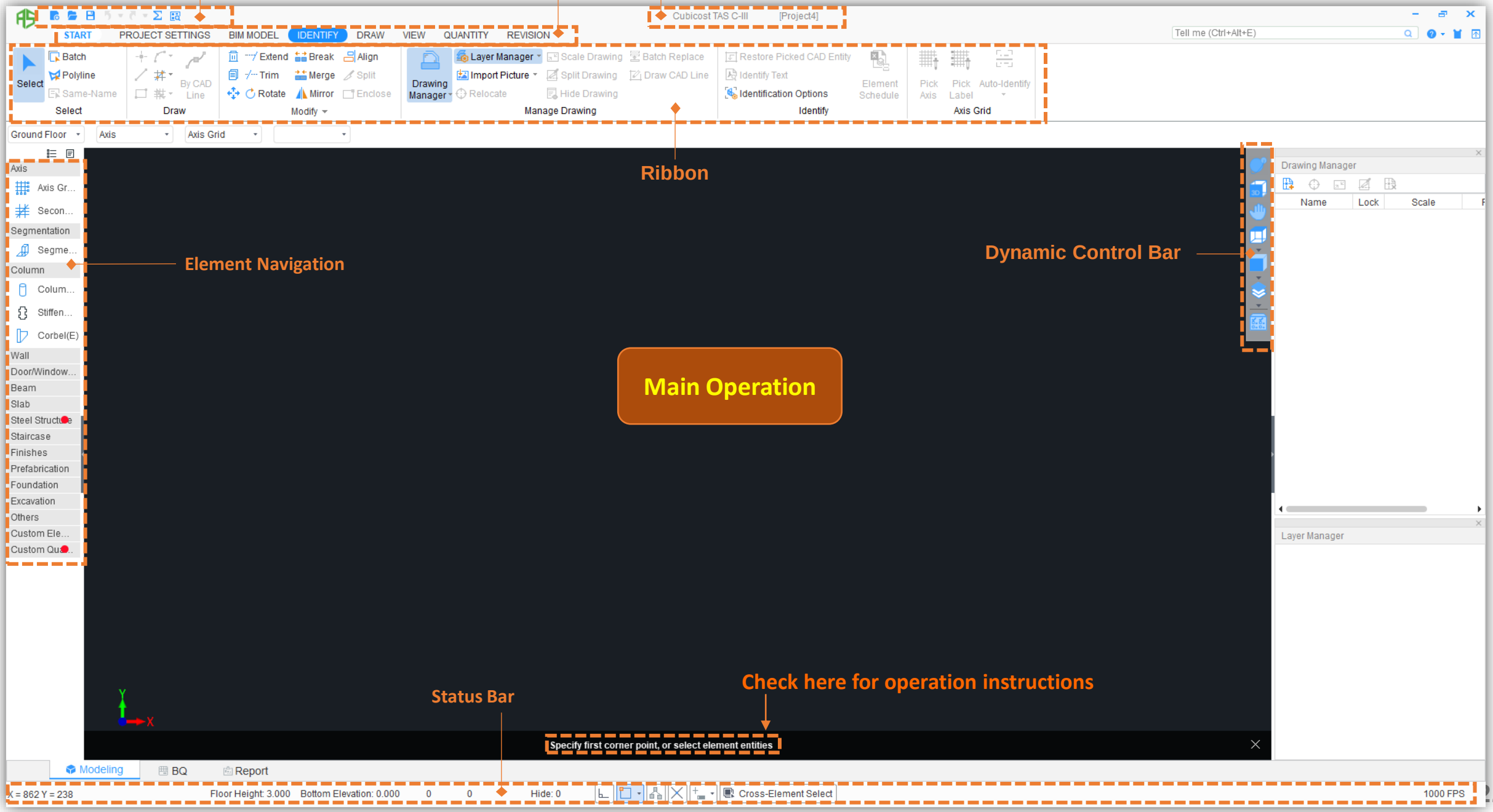
- Step 1: Input [Concrete Grade] of different elements
- Step 2: [Copy to Other Floor] if the grading is same with certain floor(s)



	Element Type	Concrete G	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 Bean	20.00	Common Concrete	Common Formwork			150.000
11	Brick Wall				M10	Cement Mortar	0.000

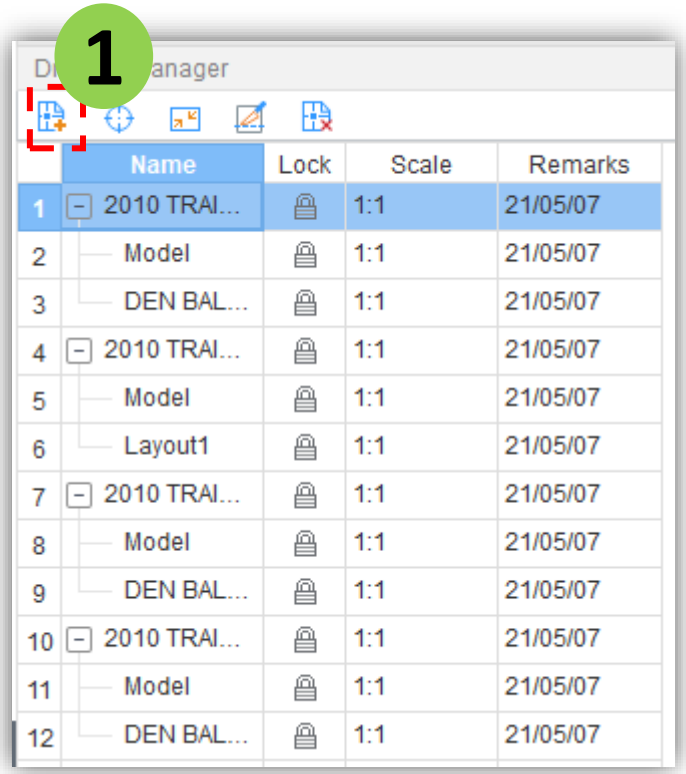
4.0 Drawing Management

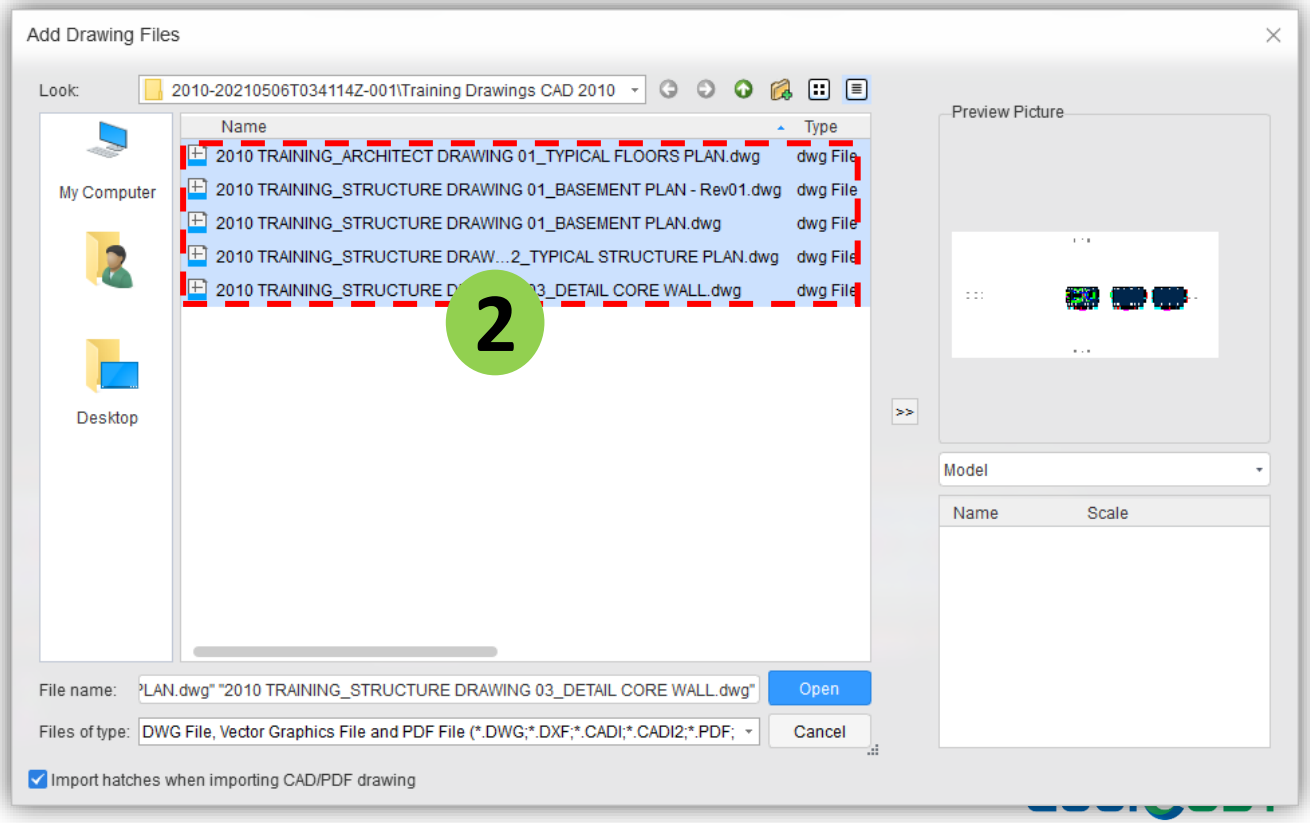



Quick Access Toolbar
Function Tab
Application Name, Project Name
Cubicost TAS C-III [Project4]
START
PROJECT SETTINGS
BIM MODEL
IDENTIFY
DRAW
VIEW
QUANTITY
REVISION
Tell me (Ctrl+Alt+E)
Select
Batch
Polyline
Same-Name
By CAD Line
Extend
Break
Align
Trim
Merge
Split
Rotate
Mirror
Enclose
Drawing Manager
Layer Manager
Import Picture
Relocate
Scale Drawing
Split Drawing
Hide Drawing
Batch Replace
Draw CAD Line
Restore Picked CAD Entity
Identify Text
Identification Options
Element Schedule
Pick Axis
Pick Label
Auto-Identify
Select
Draw
Modify
Manage Drawing
Identify
Axis Grid
Ribbon
Ground Floor
Axis
Axis Grid
Element Navigation
Dynamic Control Bar
Main Operation
Drawing Manager
Name
Lock
Scale
Layer Manager
Check here for operation instructions
Status Bar
Specify first corner point, or select element entities
Modeling
BQ
Report
X = 862 Y = 238
Floor Height: 3.000
Bottom Elevation: 0.000
Hide: 0
Cross-Element Select
1000 FPS

4.0a Import Drawing

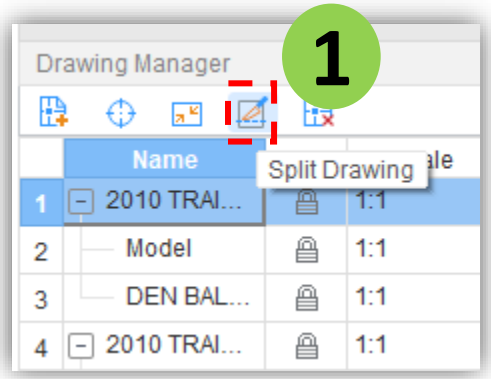
- Step 1: Tab {Identify}, [Add] drawing(s)
- Step 2: Select Drawing(s)

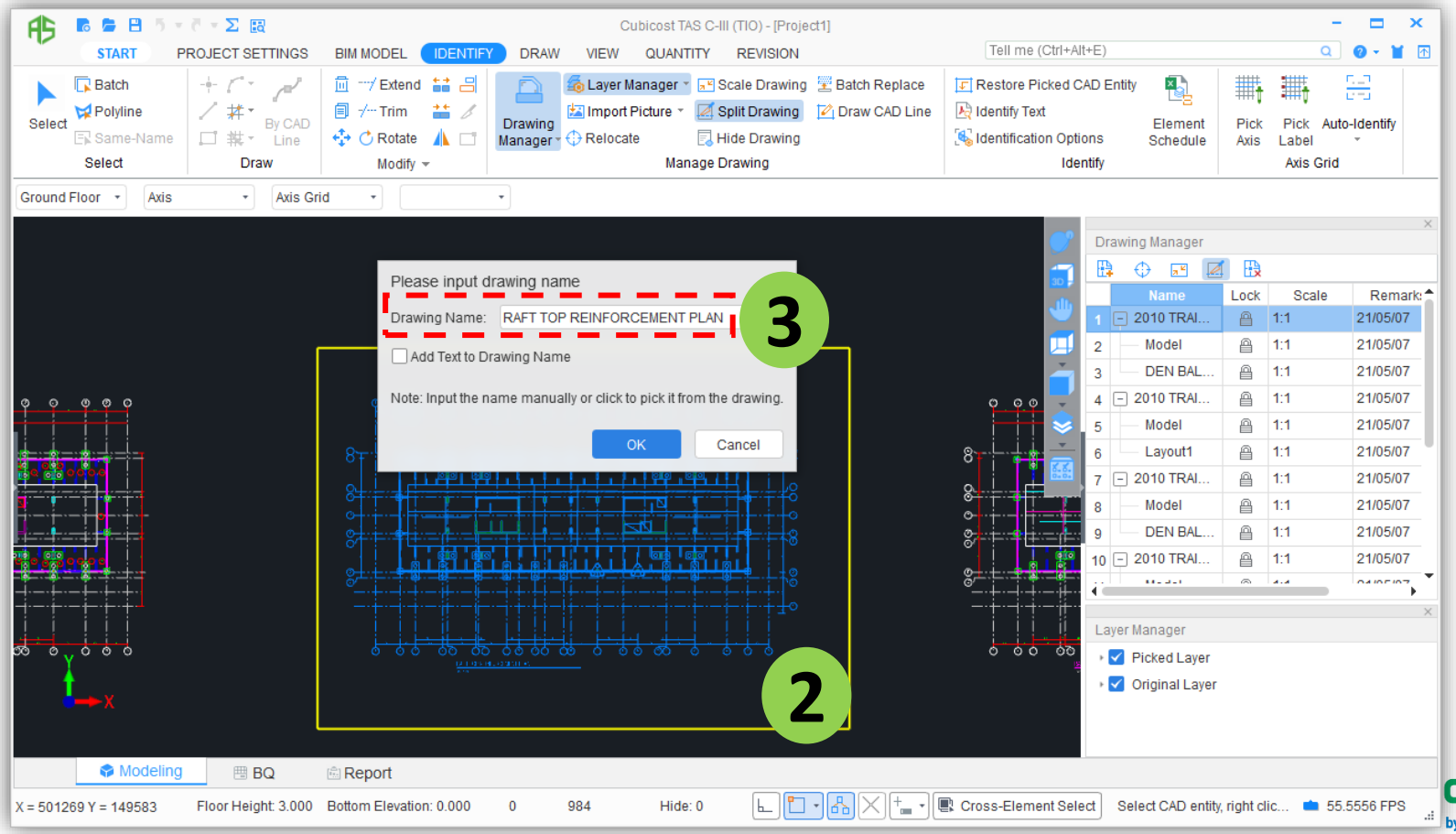




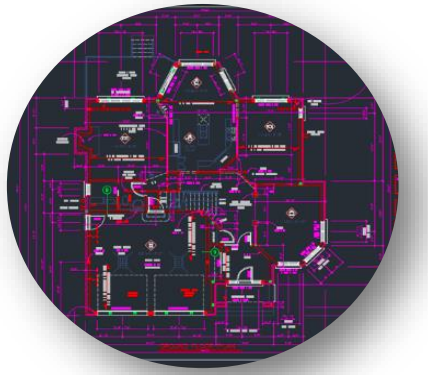
4.0b Split Drawing

- 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





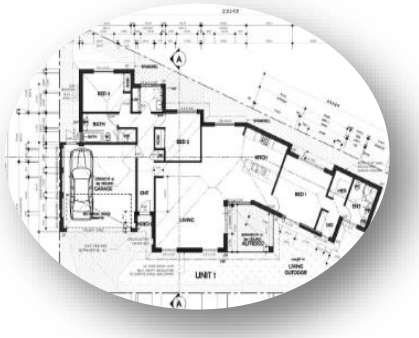
4.0 Drawing Compatible



*.dwg

Recommend operate process:

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



Vector PDF/Scanned PDF

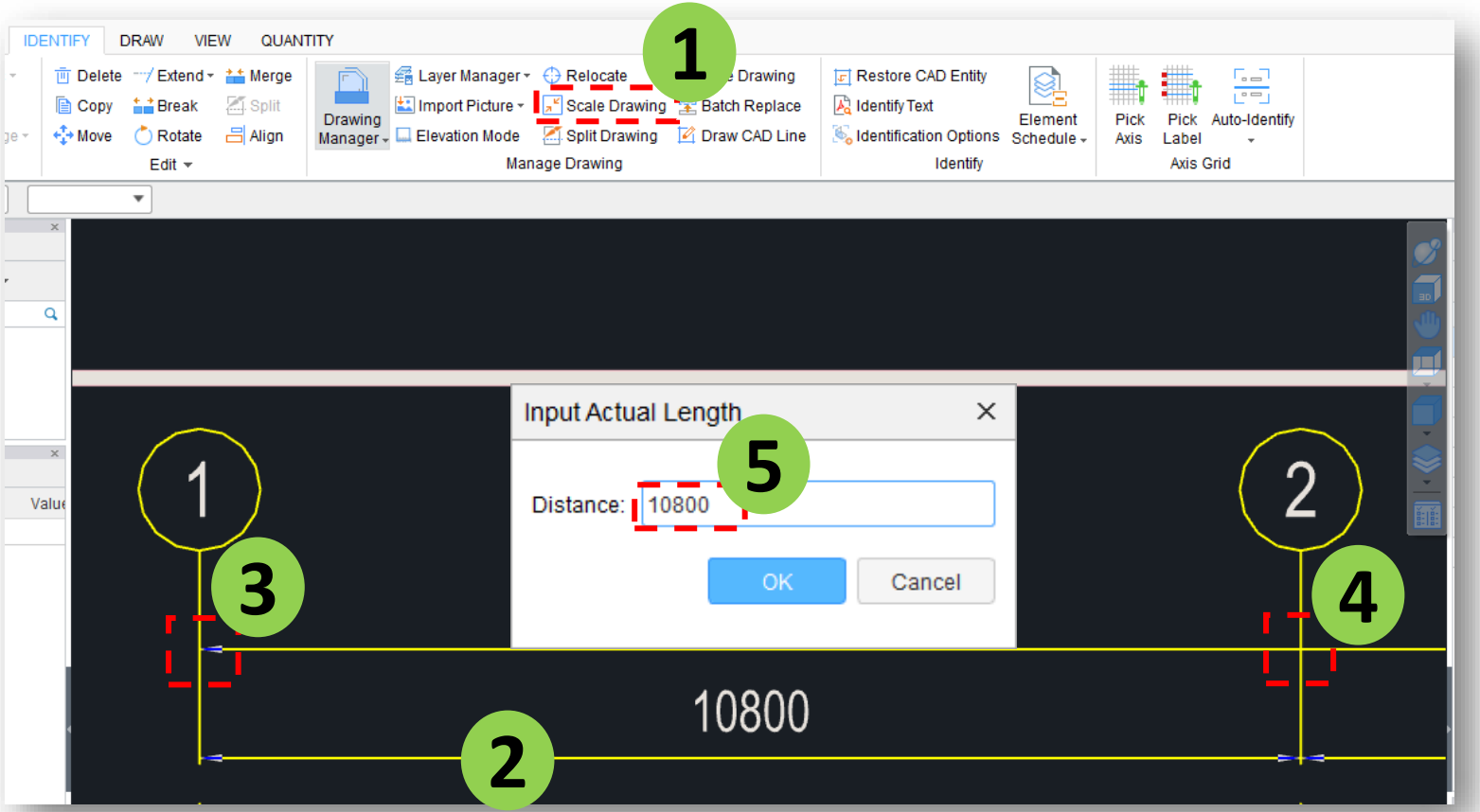
Recommend operate process:

- 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



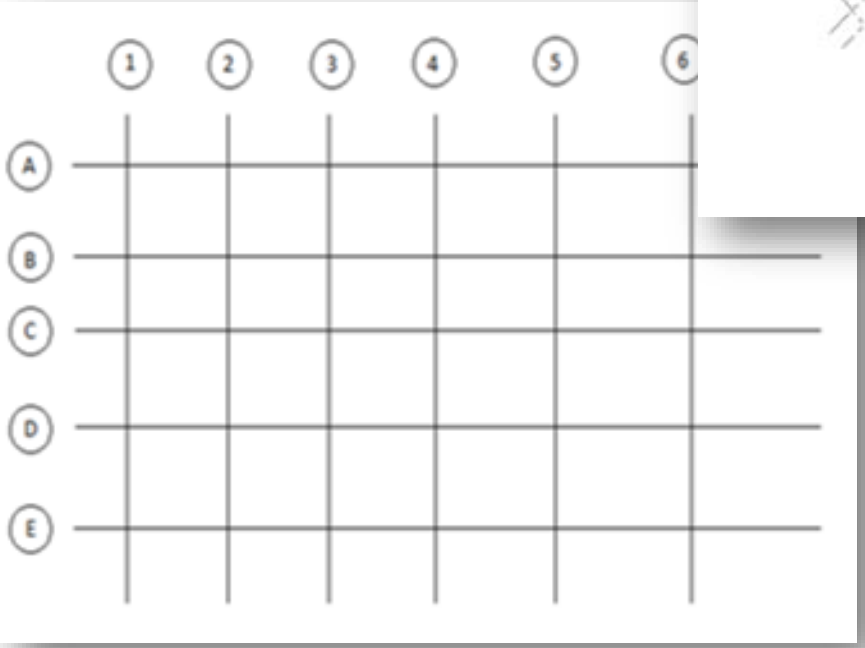
Point Type

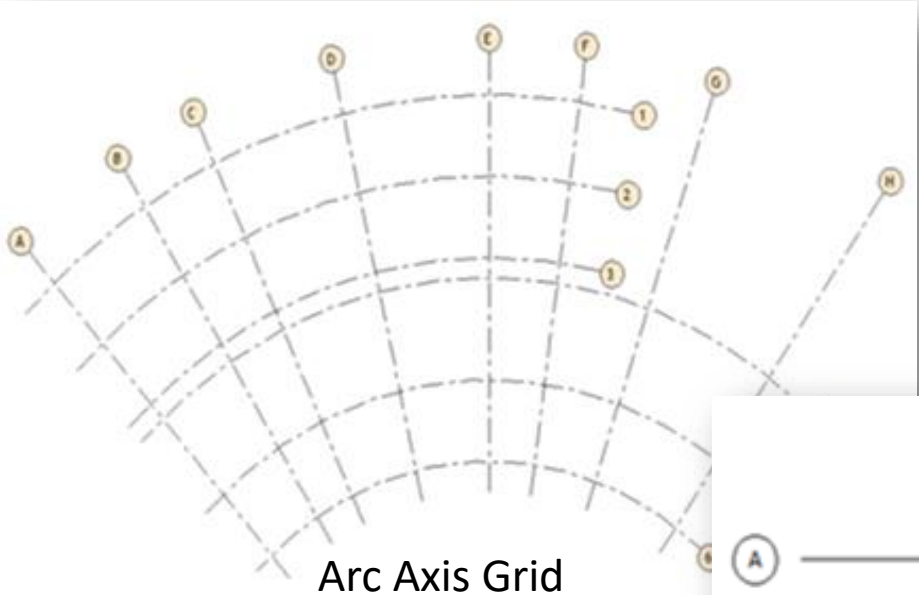
Axis Grid

Type of Axis

- Type of Axis

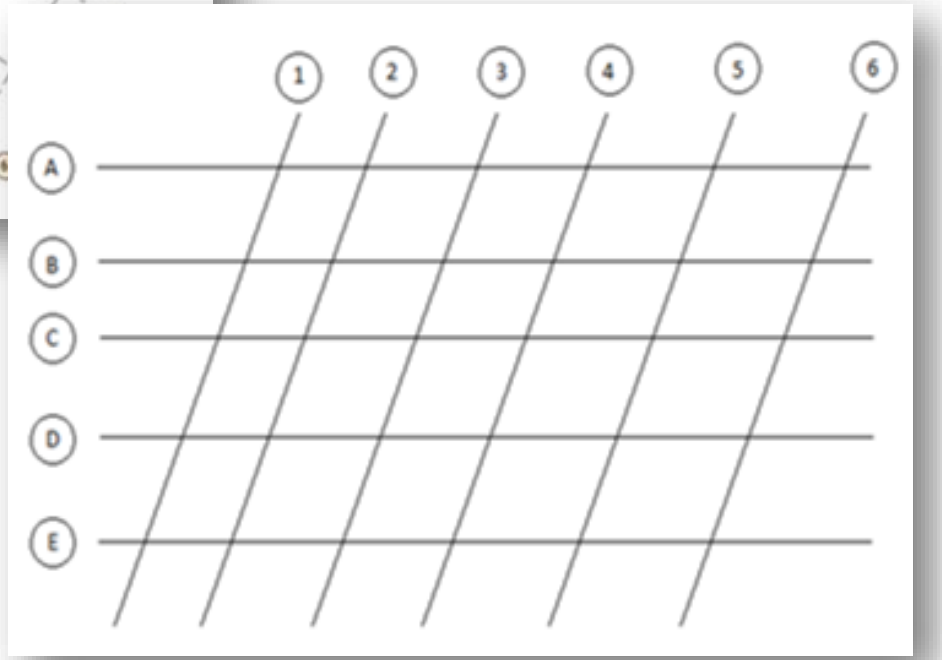
Orthogonal Axis Grid





Arc Axis Grid

Diagonal Axis Grid



4.0 Axis

Auto-Identify

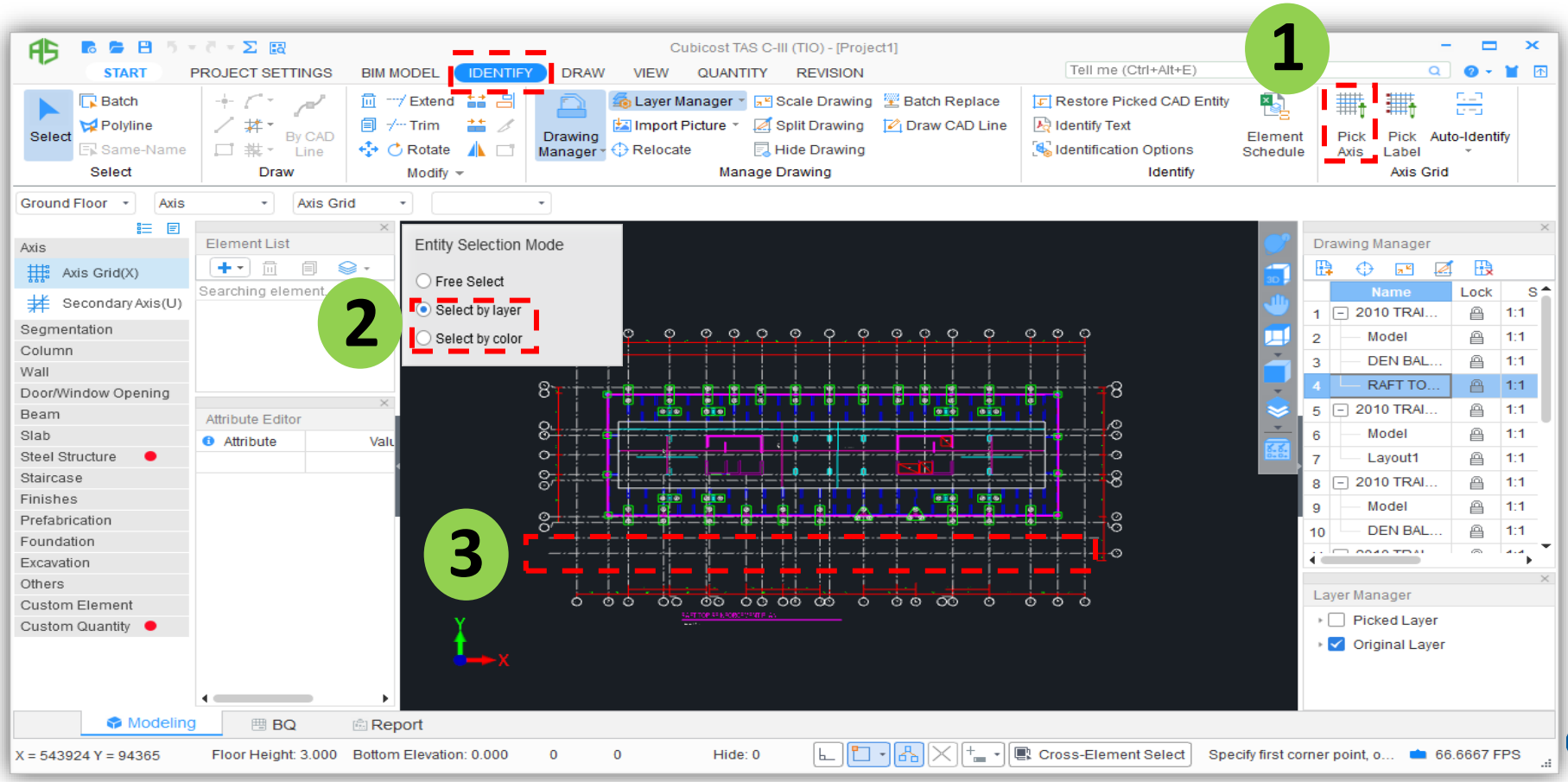
- Pick Sideline
- Pick Label
- Auto Identify

Manual

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

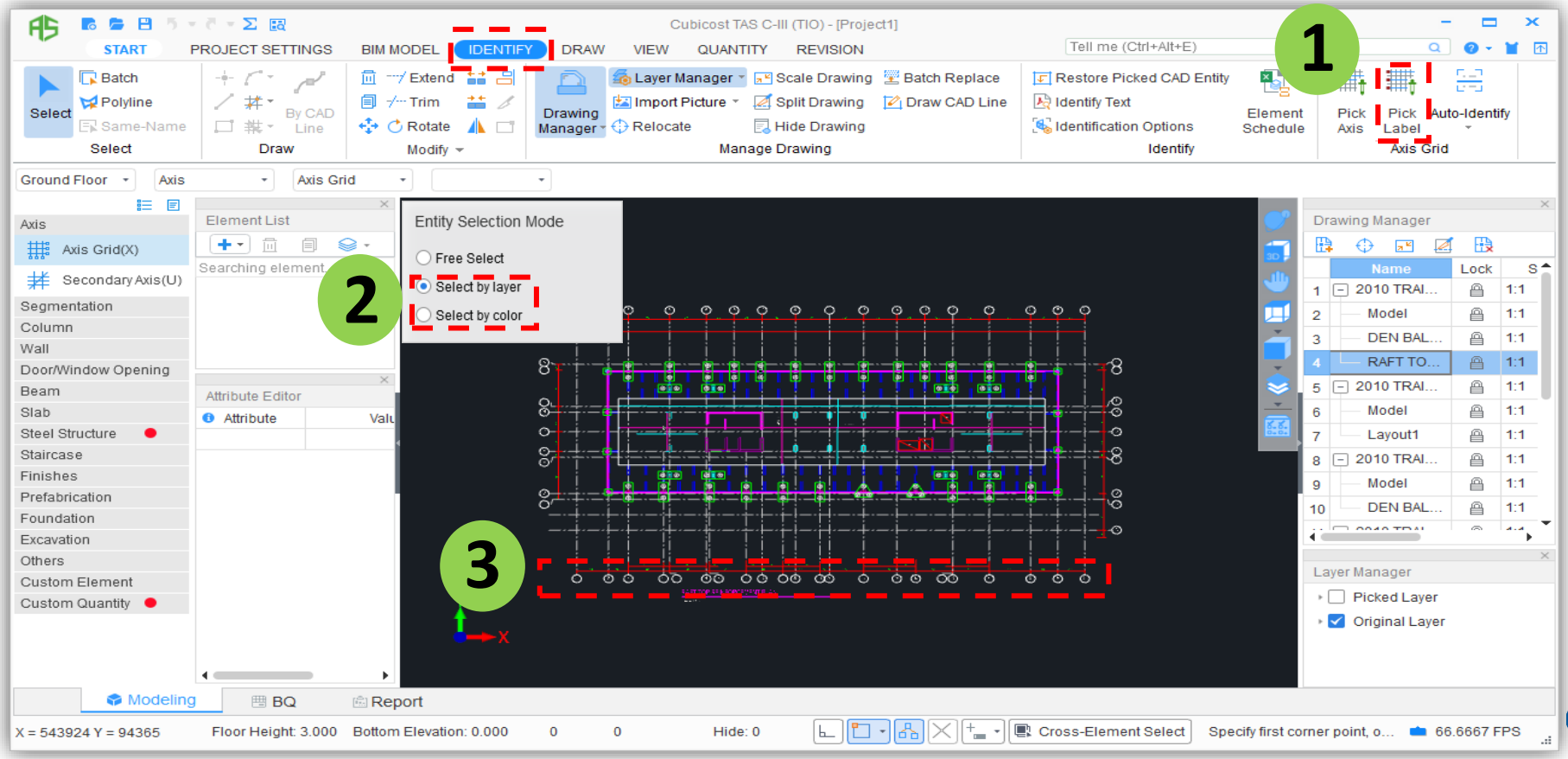
4.0 Axis (Auto-Identify) – Pick Sideline

- 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



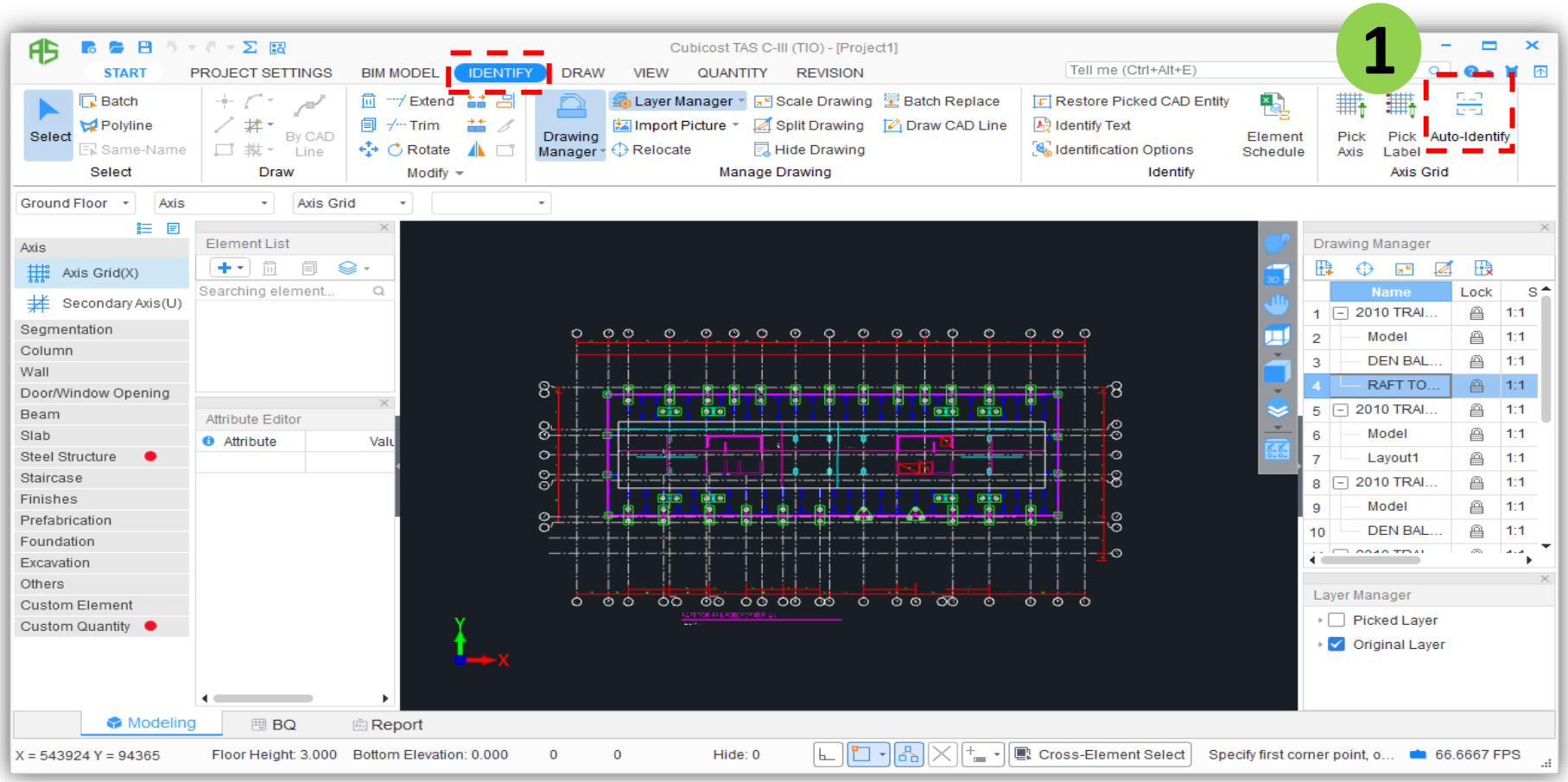
4.0 Axis (Auto-Identify) – Pick Sideline

- 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

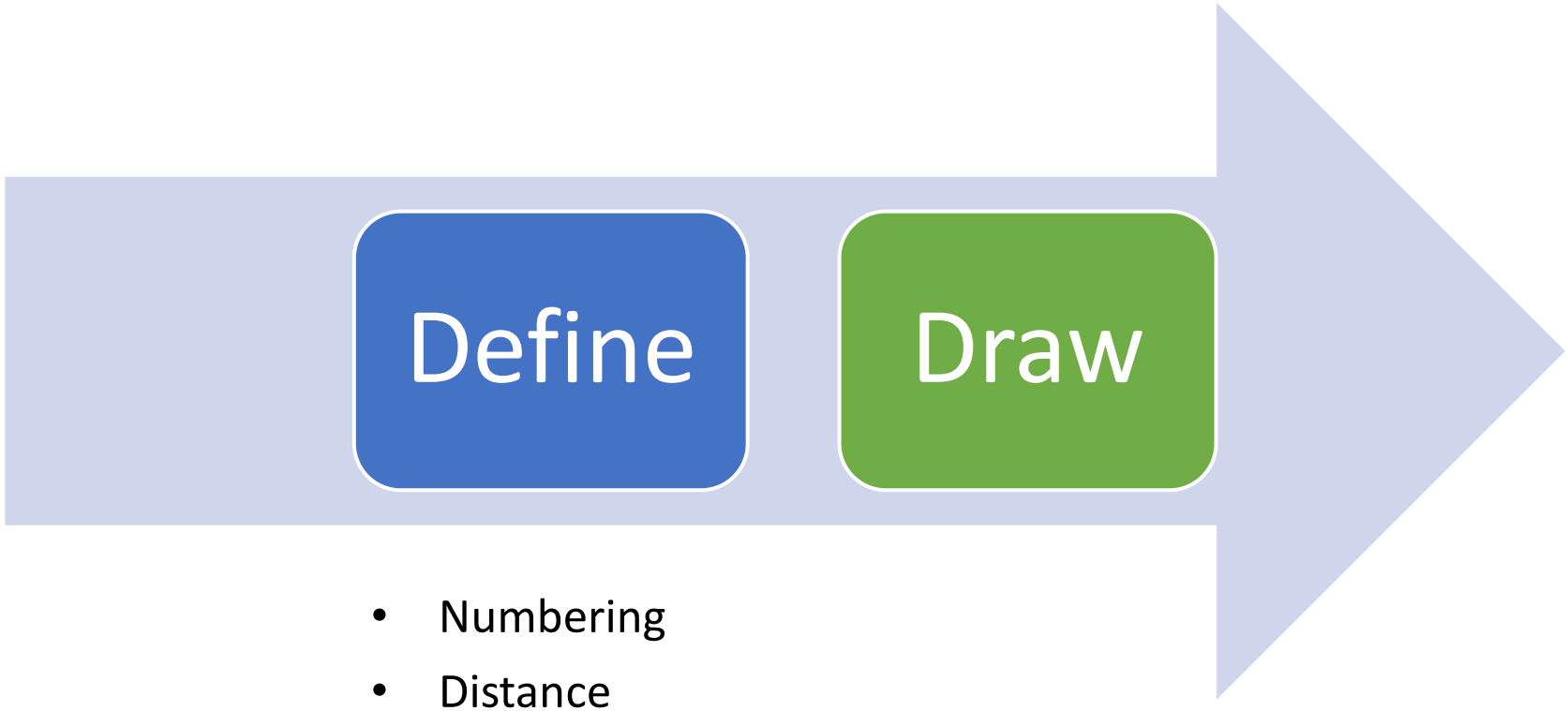


4.0 Axis (Auto-Identify) – Auto-Identify

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



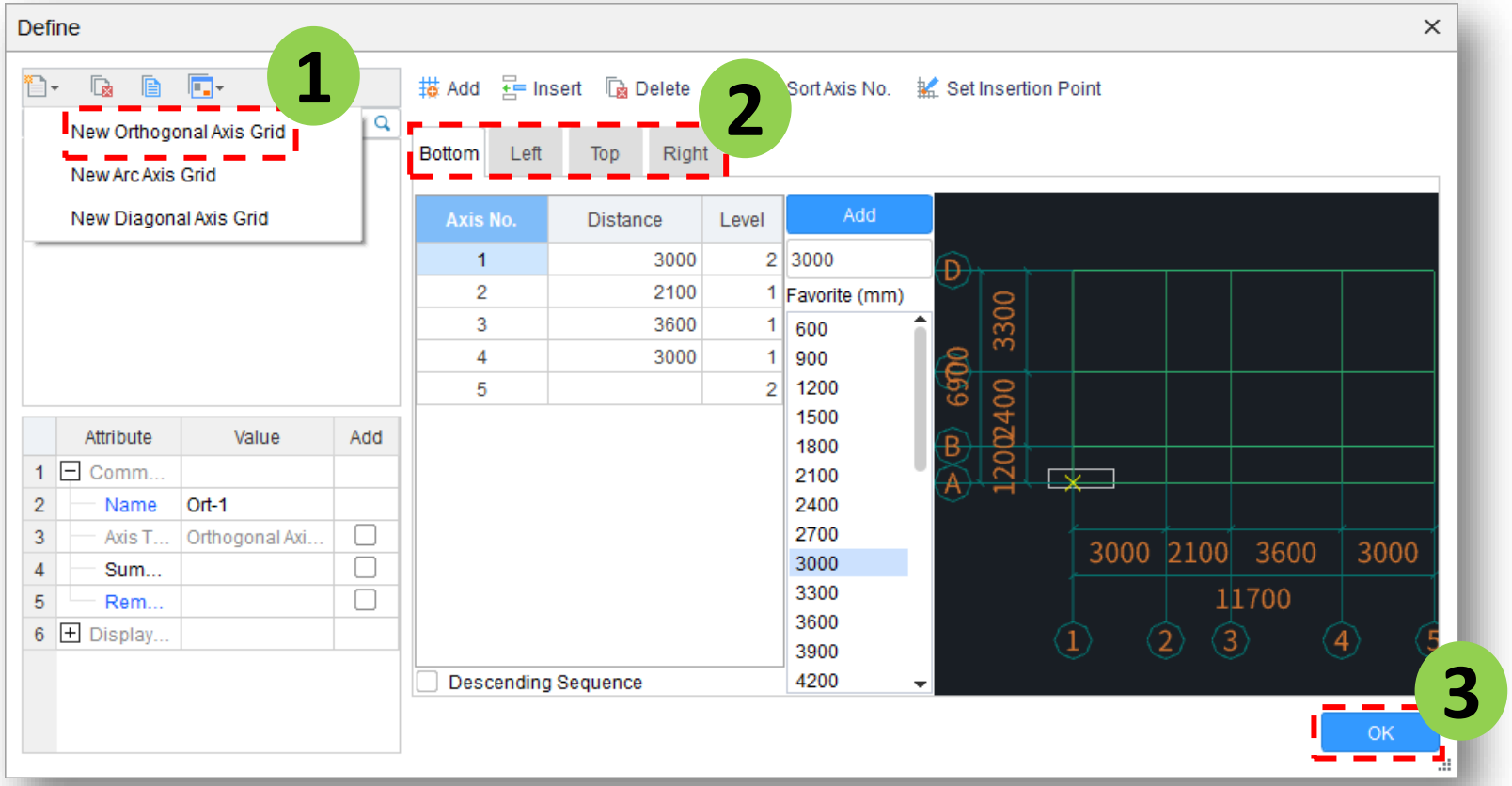
3.0 Axis (Manual)



- 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]

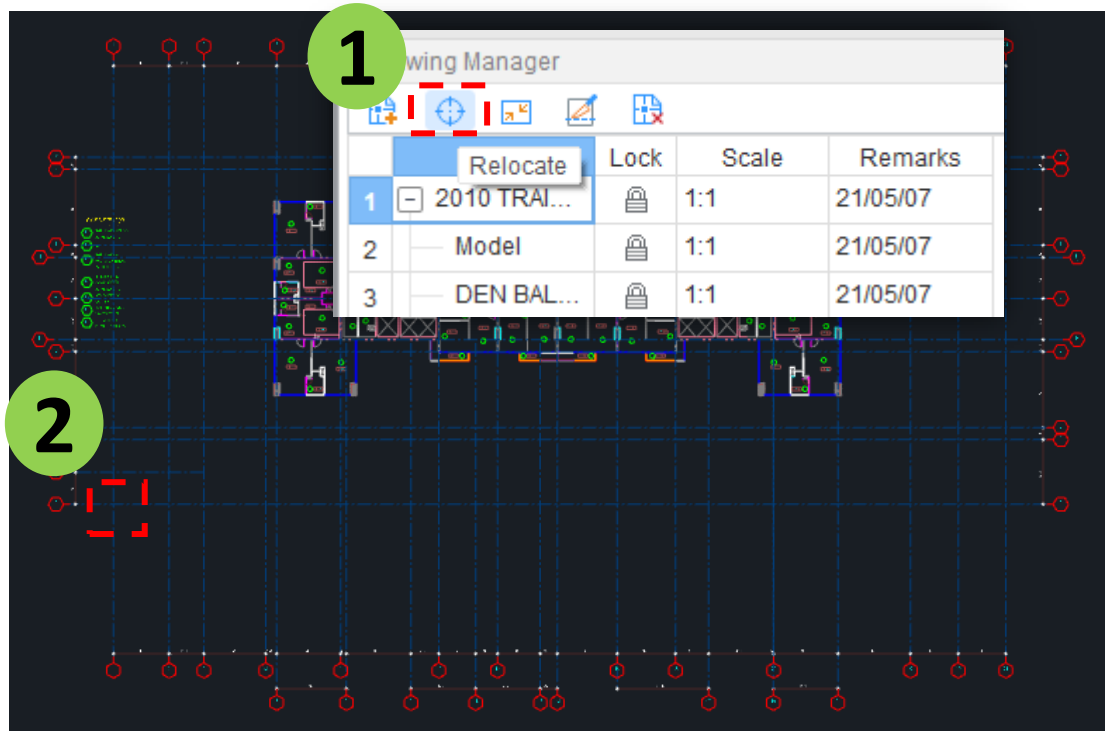


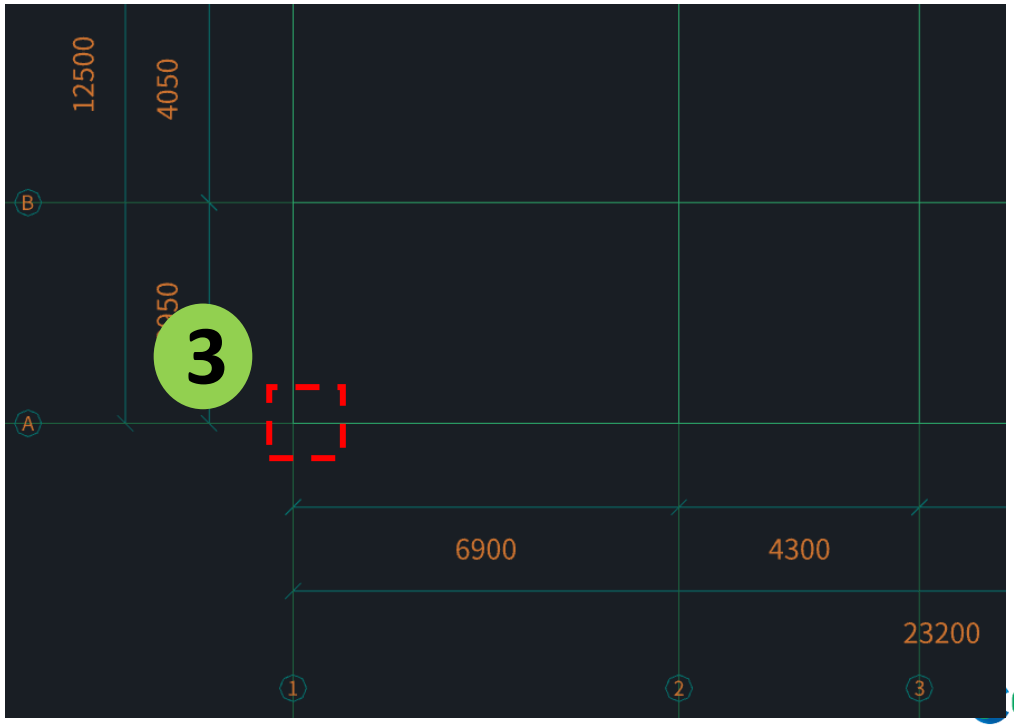
4.0c Locate Drawing

- 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

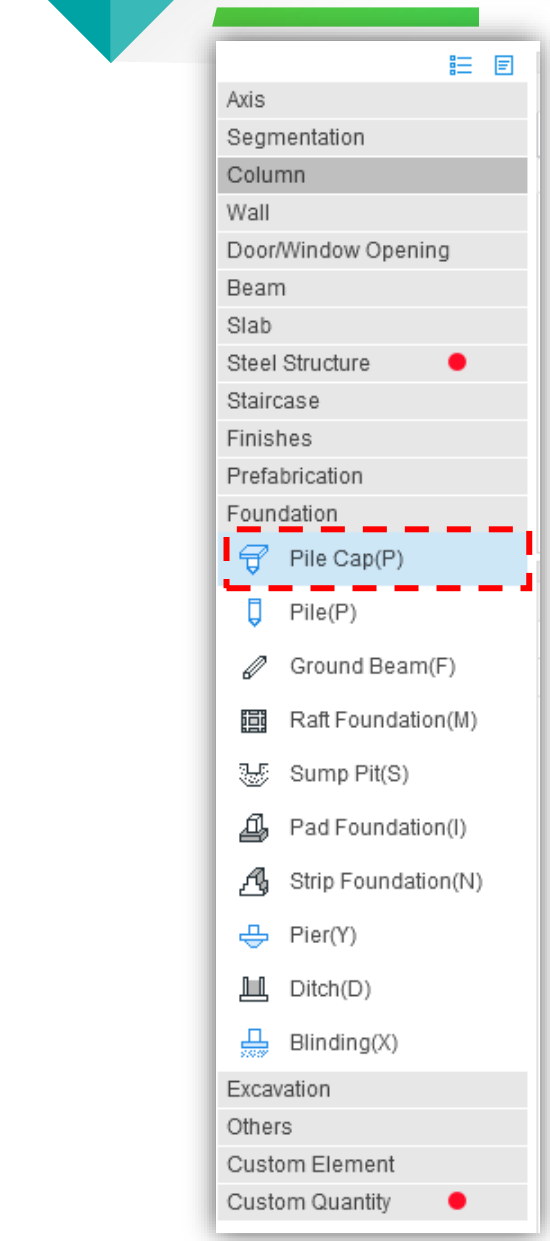
*Tips: use Intersection point 

if the point cannot be snap accurately





Point Type



Pile Cap

5.9 Pile Cap

4.0 Pile Cap

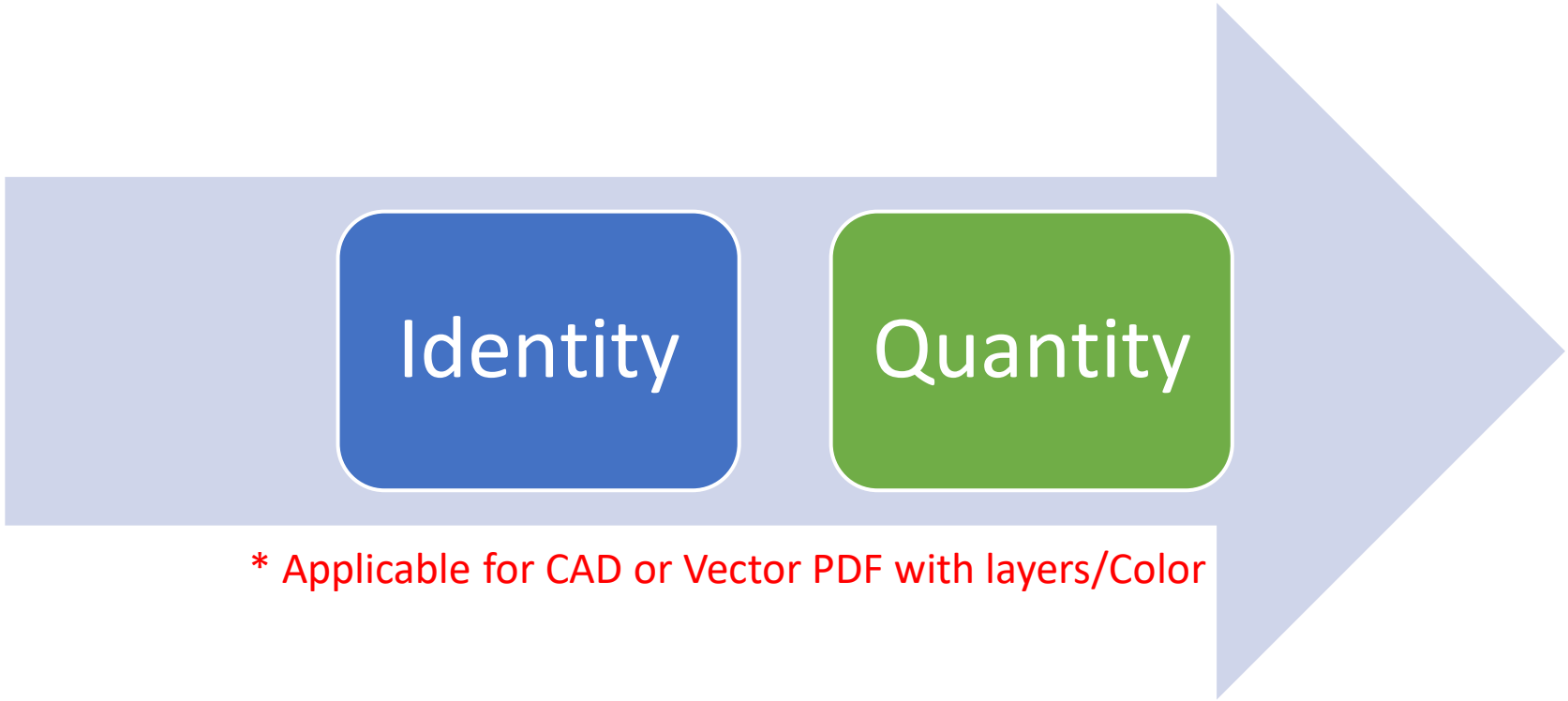
Auto-Identify

- Pick Sideline
- Pick Label
- Auto Identify

Manual

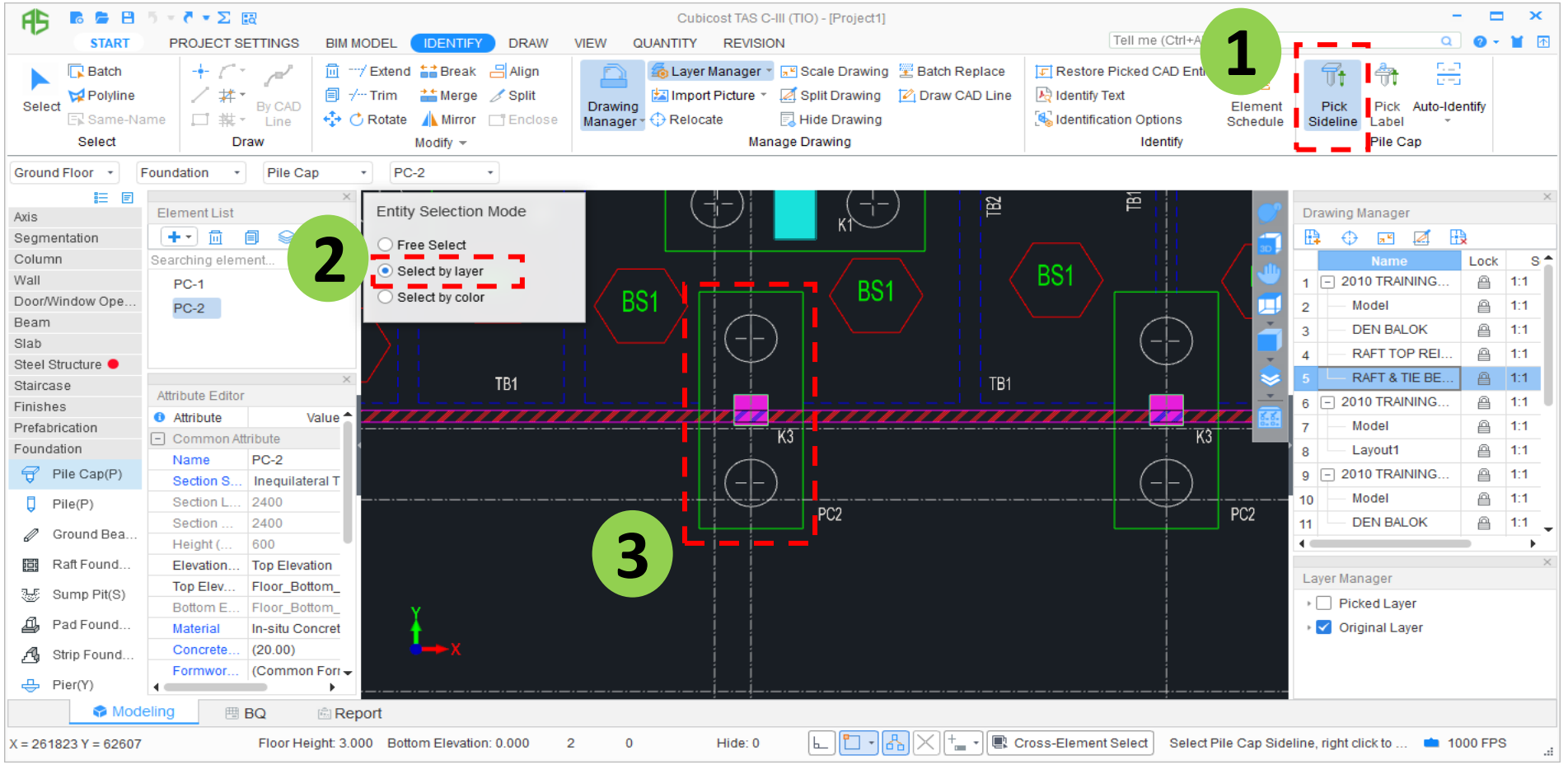
- New pile cap
- Input name & size
- Draw

5.1(ii) Pile Cap – Auto Identify



5.1(ii) Identify Pile Cap – Pick Sideline

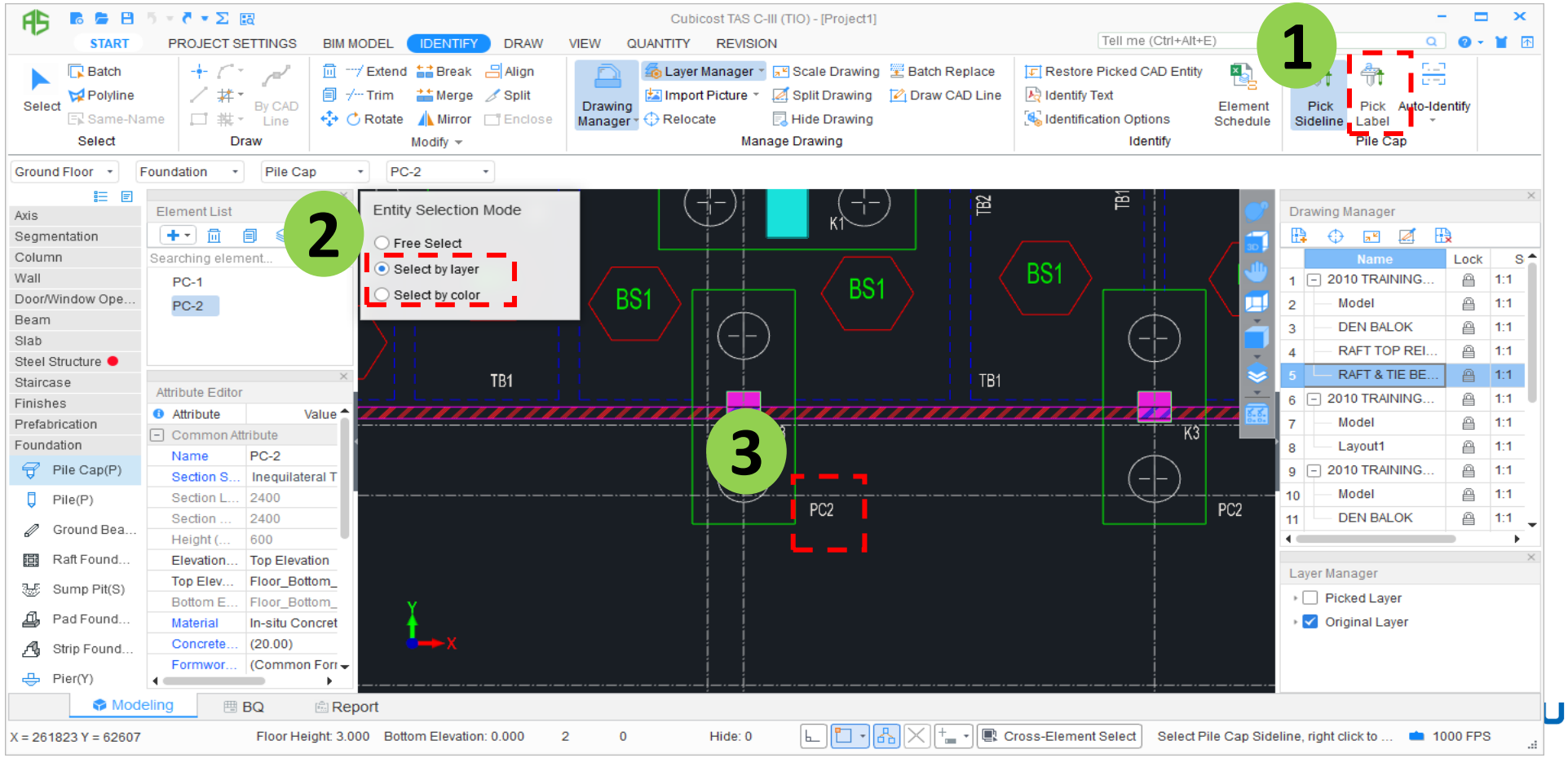
- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the frame/ side line of Pile Cap & right click



Continue →

5.1(ii) Identify Pile Cap – Pick Label

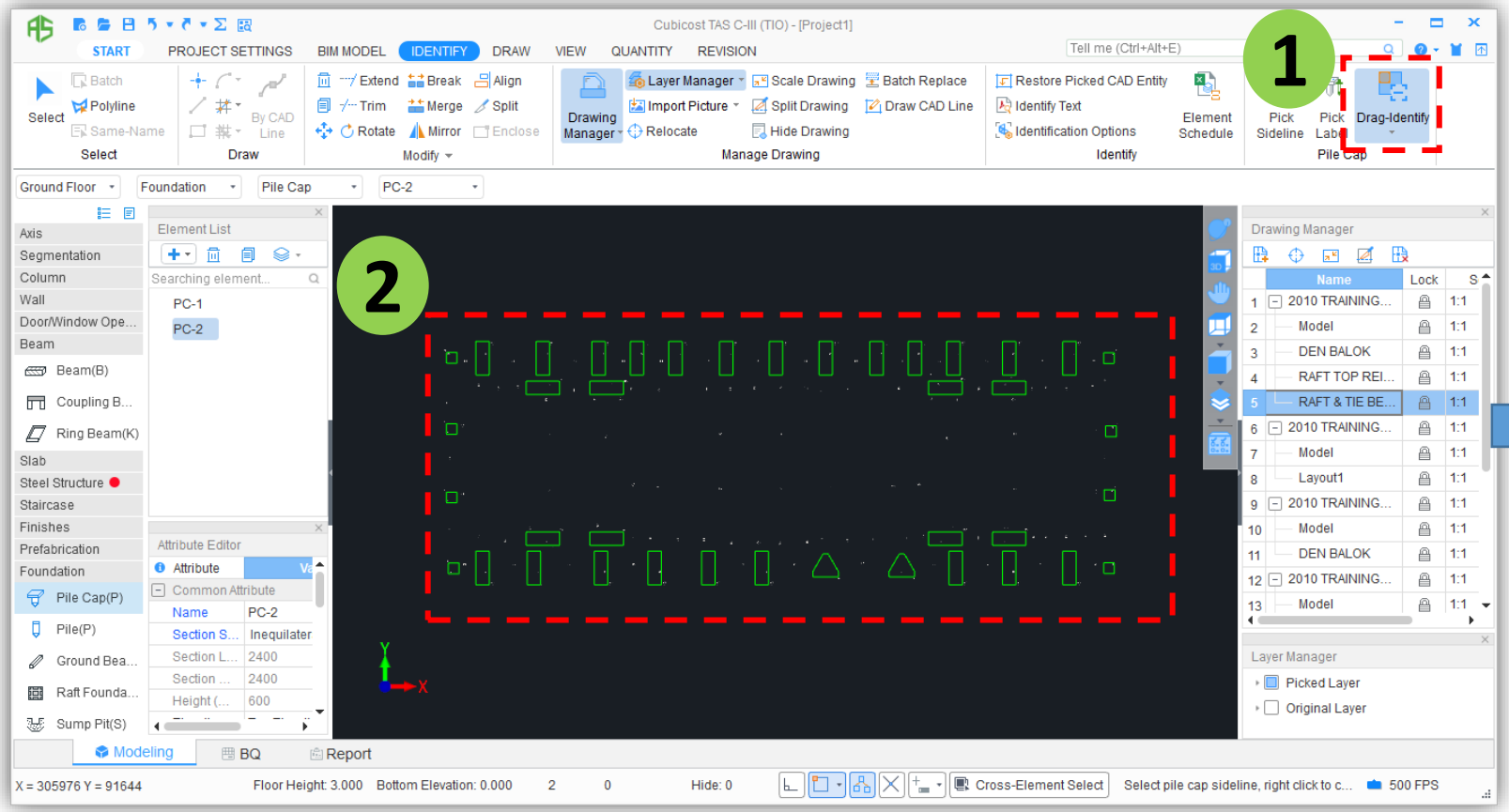
- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the name of column & right click

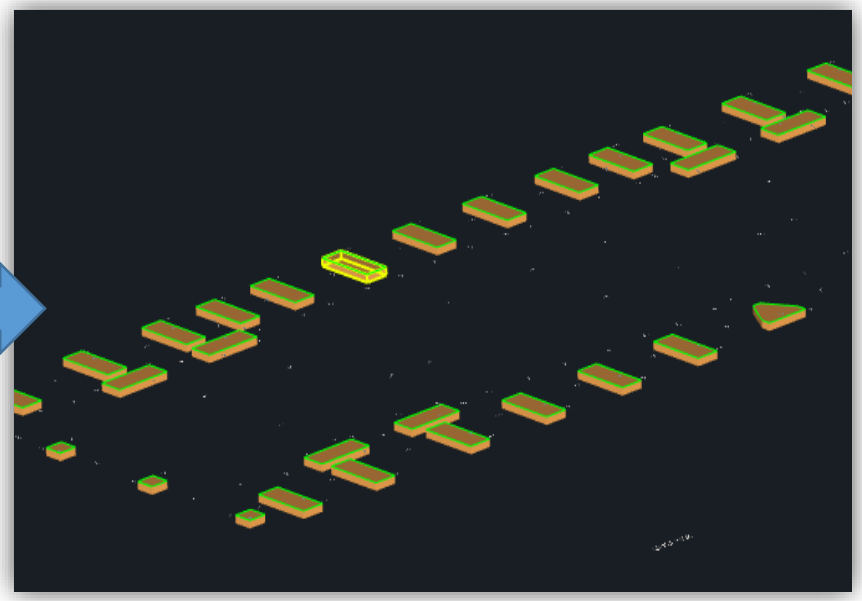


Continue →

5.1(ii) Identify Pile Cap - Identify

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

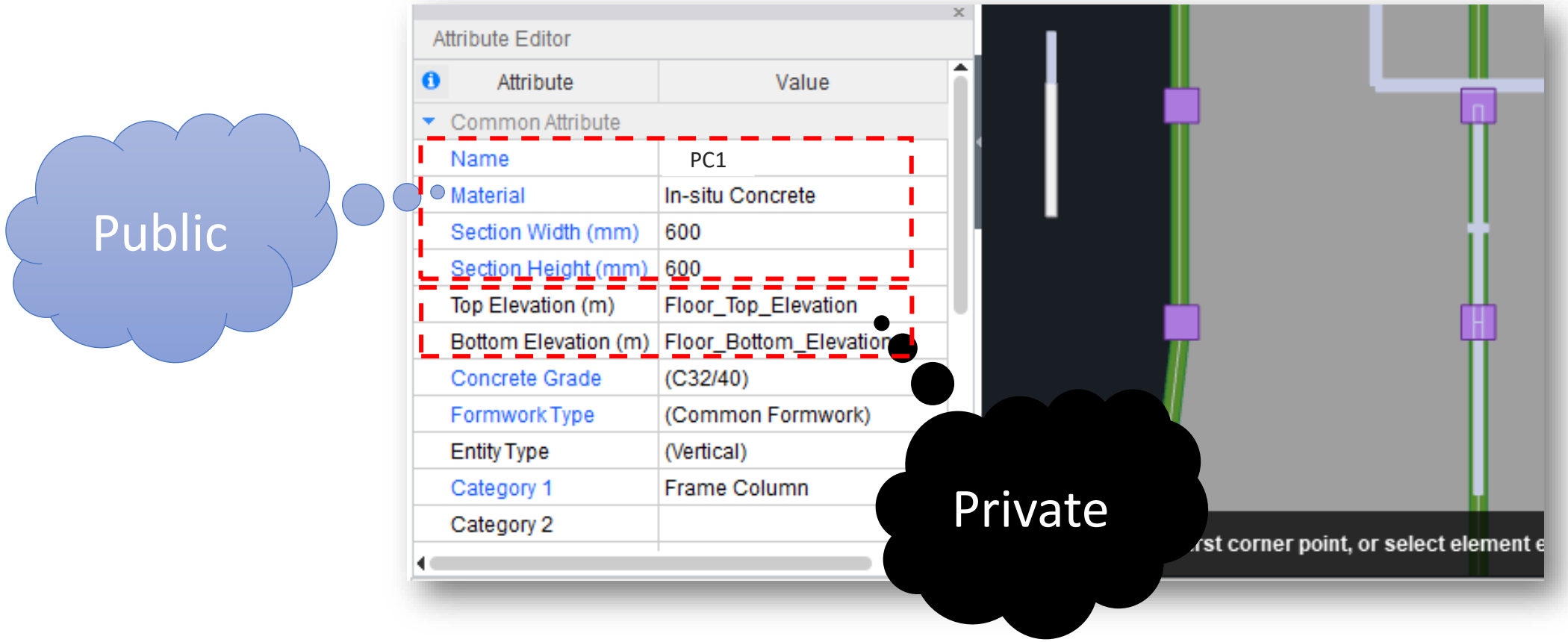




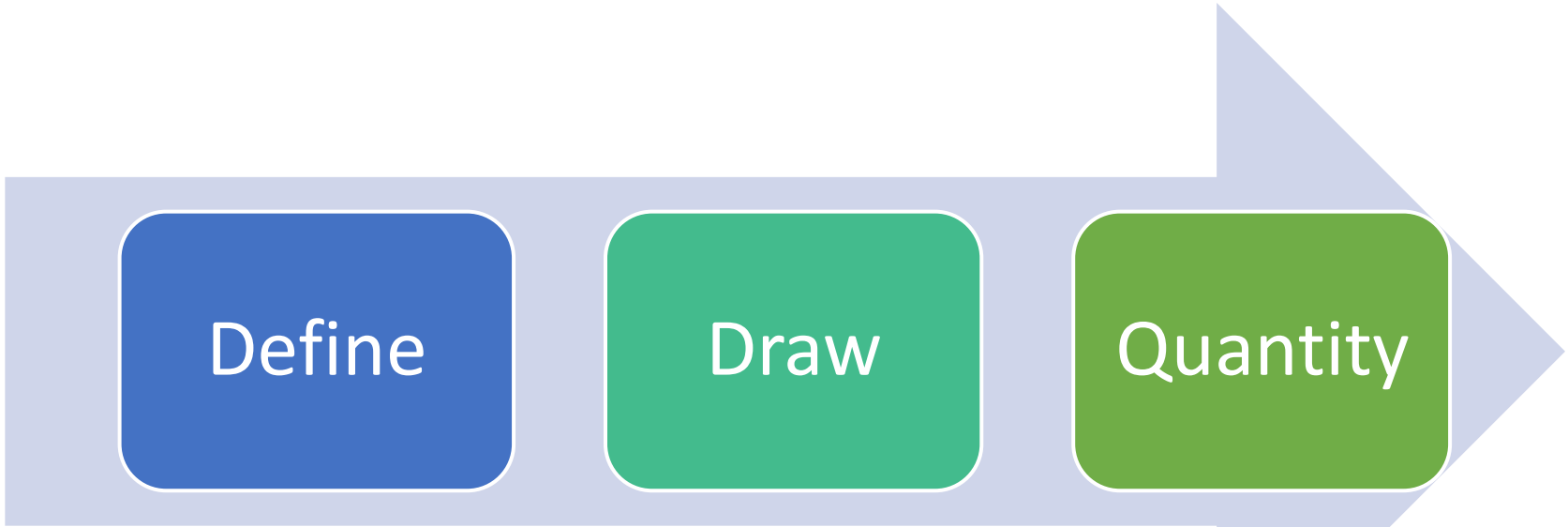
Public Attribute VS Private Attribute

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



5.9 Pile Cap – Manual way

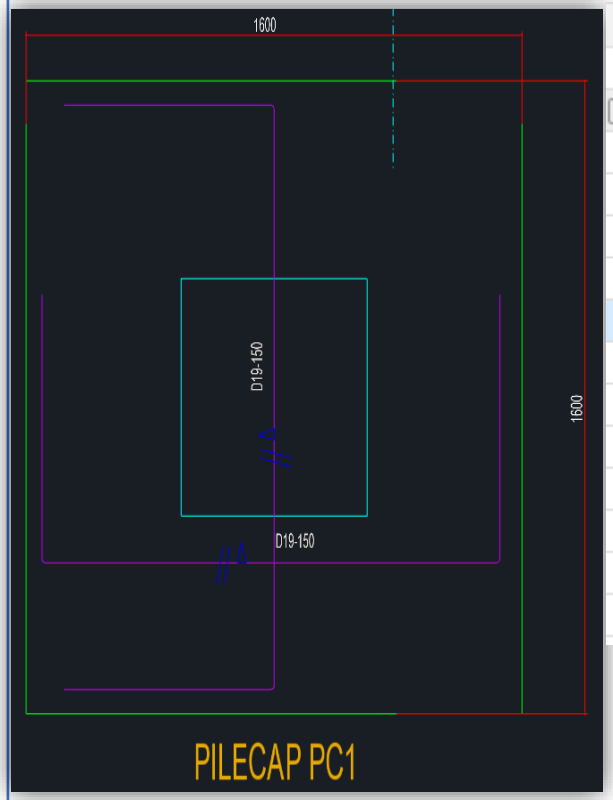


- Name
- Size

- Point
- Rotation Point

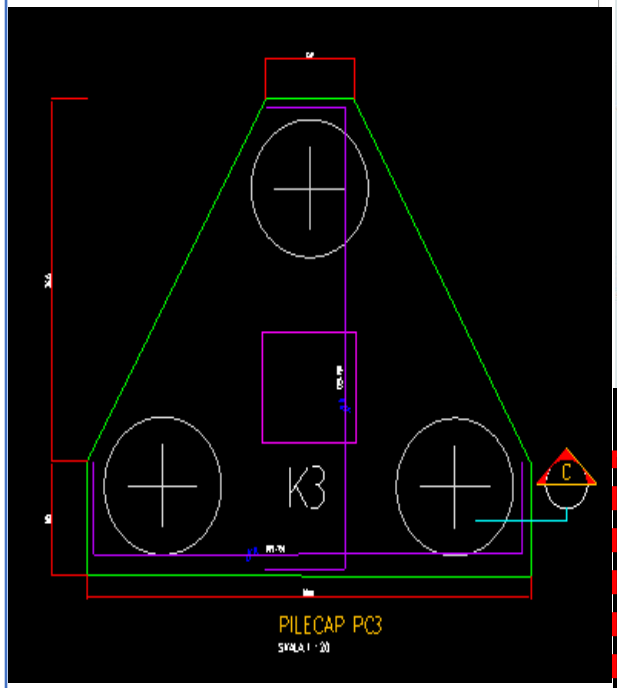
* F4 to change insert point

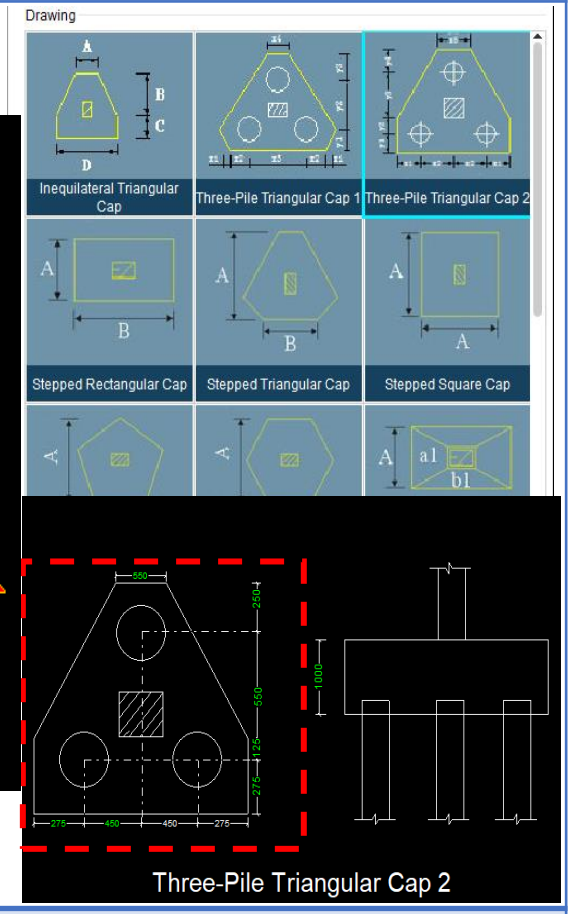
5.9a Define Pile Cap



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...



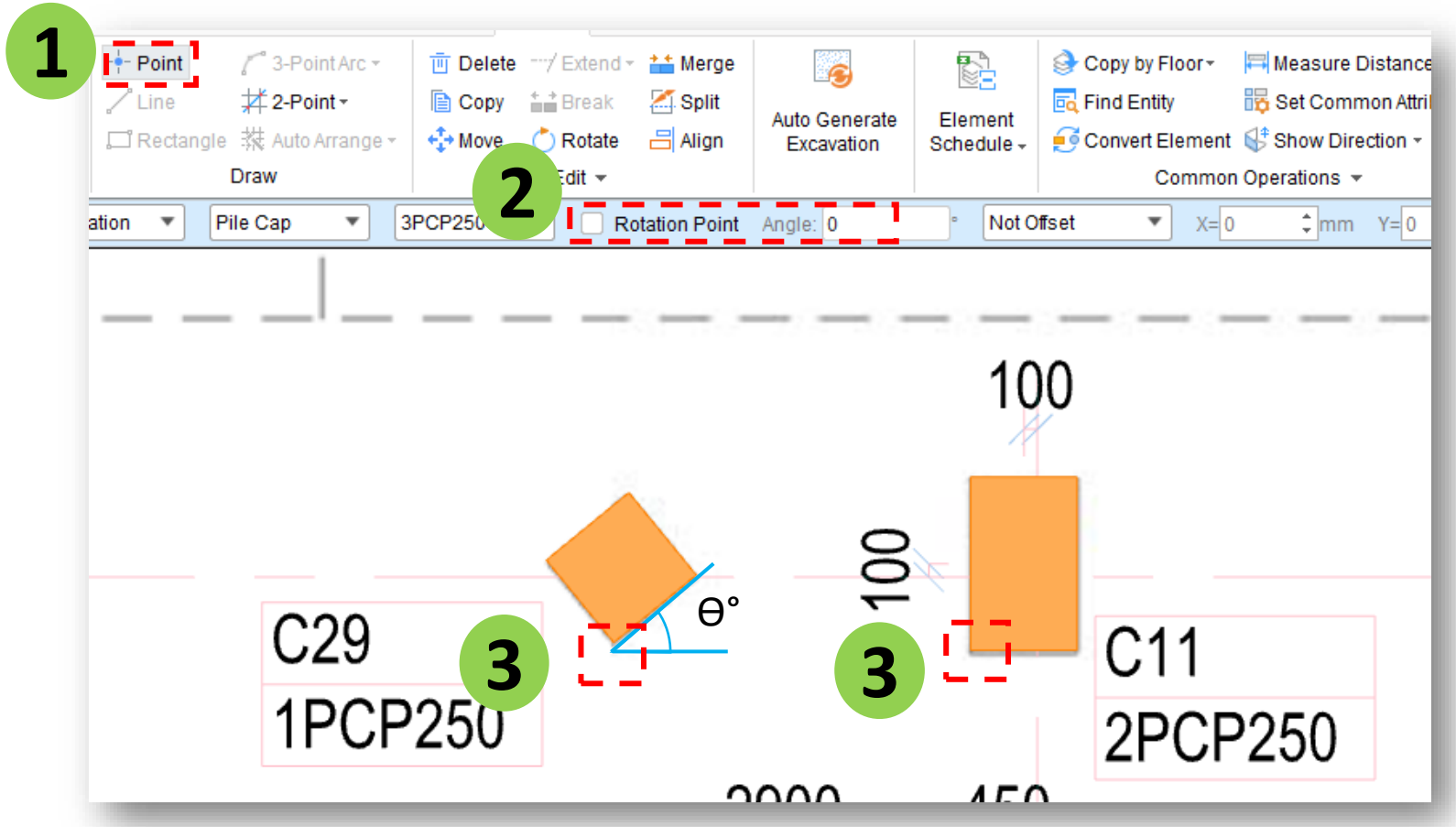


Rectangular Pile Cap

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

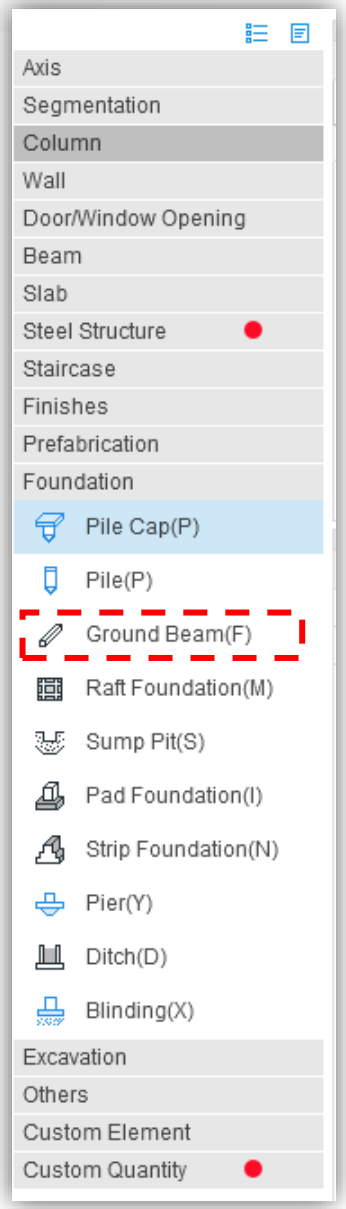
Notes:

Which quantity to extract for PILE CAP

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

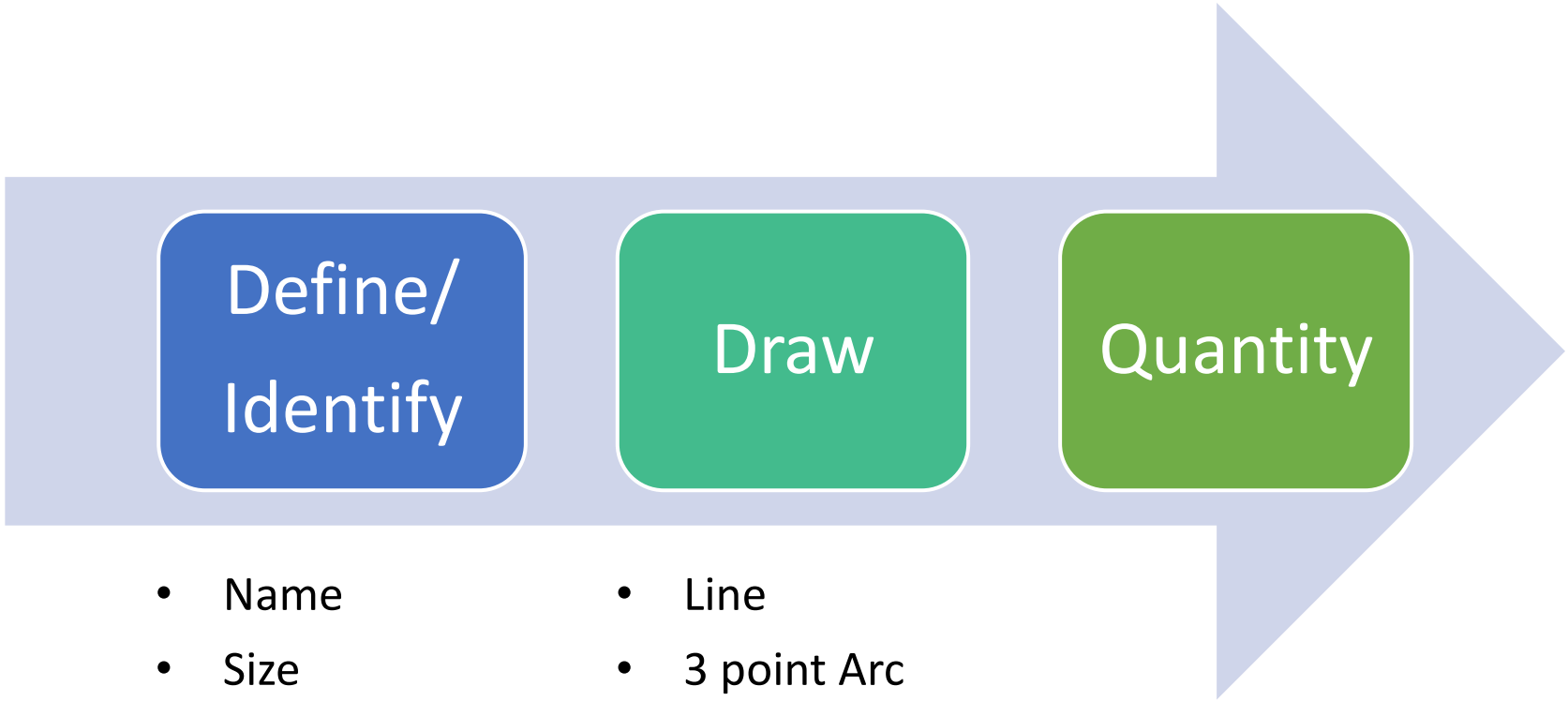
	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	1.380<Original Volume>	1.380	m3
2	Area of Formwork	AF2	4.636<Original Area of Formwork>	4.636	m2
3	Area of Soffit	AS2	1.380<Original Area of Soffit>	1.380	m2
4	Area of Side	AS4	4.636<Original Area of Side>	4.636	m2
5	Area of Top	ATS	1.380<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

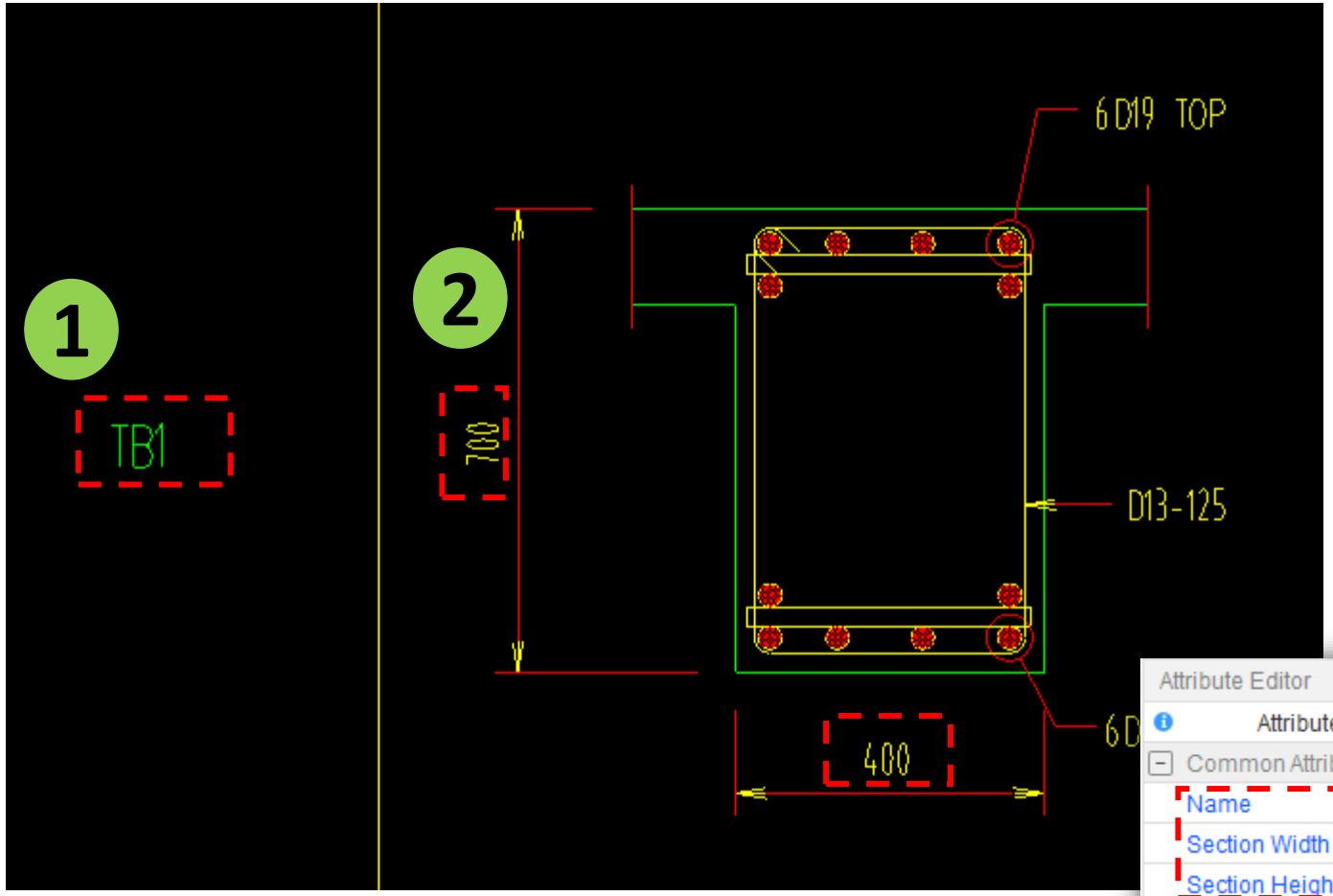


- Name
- Size
- Material

- Line
- 3 point Arc

* F4 to change alignment

5.4a Define Beam

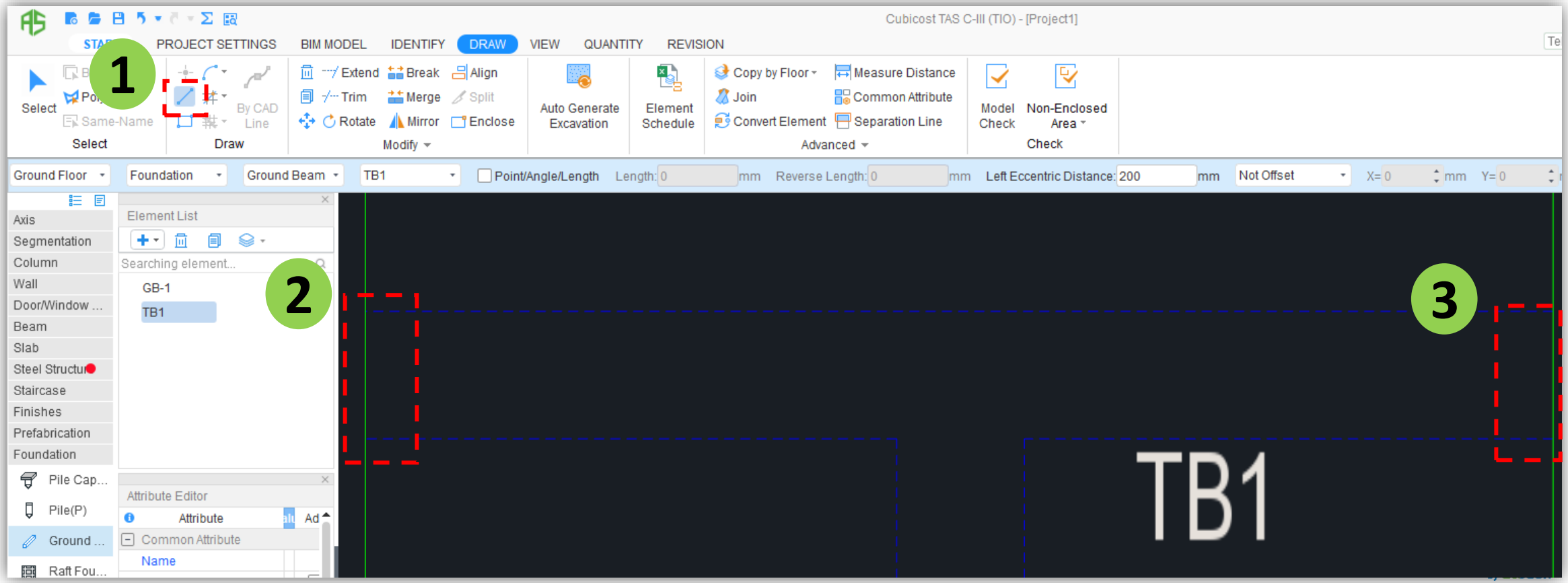


Attribute Editor

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...	☐

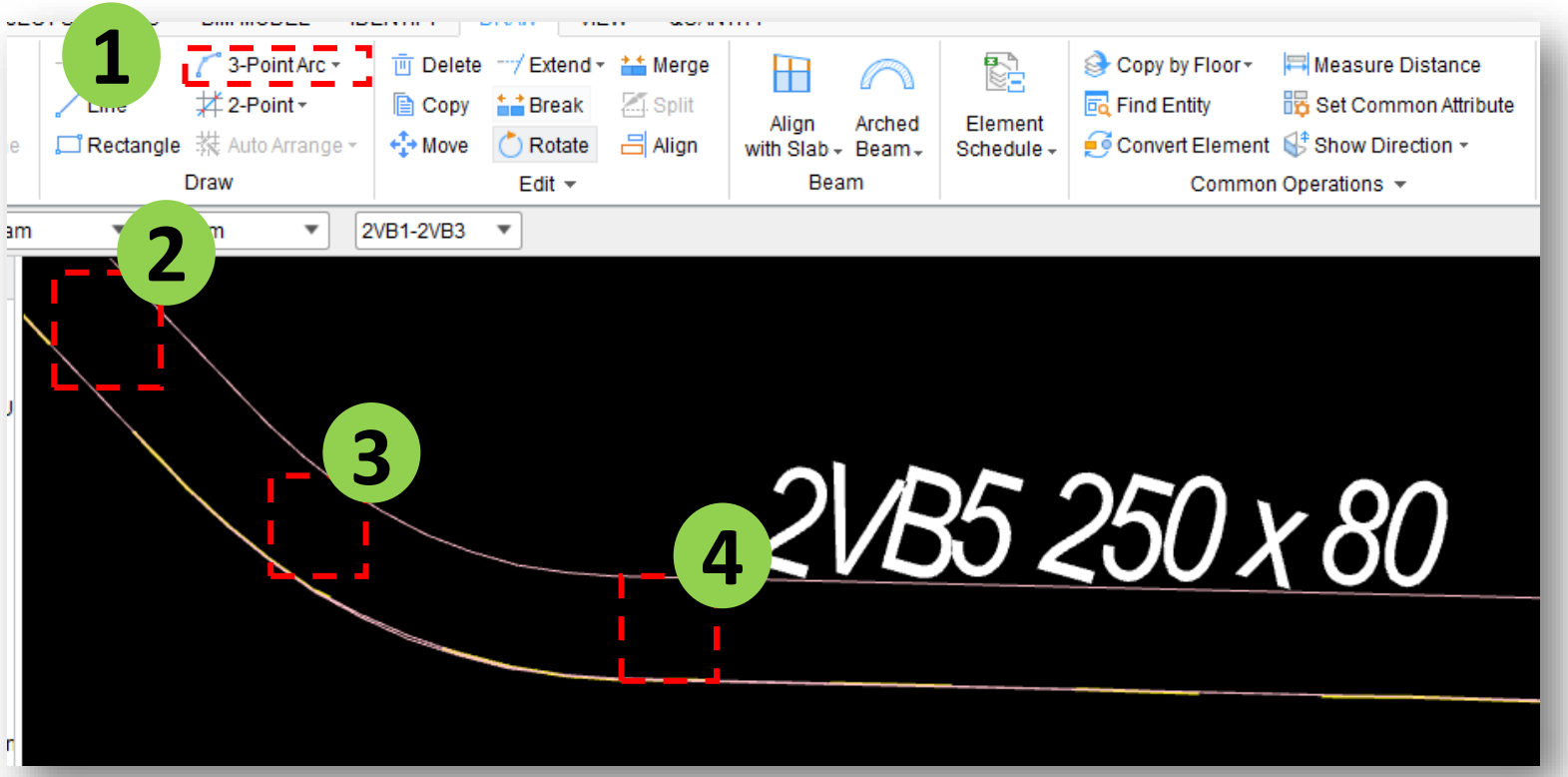
5.4b Draw Beam

- 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)

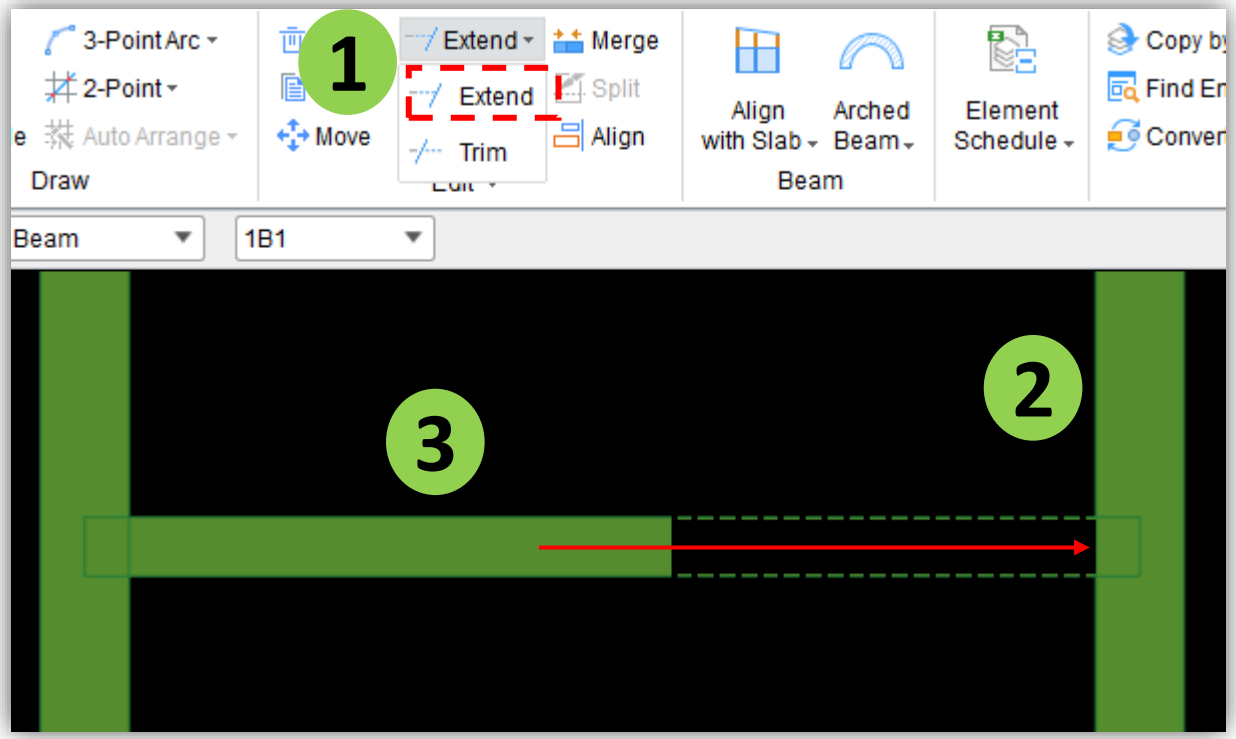
- Step 1: Tab {Draw}, Click [3-point Arc] to draw curve beam
- Step 2: Begin from Start Point
- Step 3: Continue at Mid Point
- Step 4: Stop at End Point



5.4b Draw Beam (cont'd)

To Extend beam/ wall

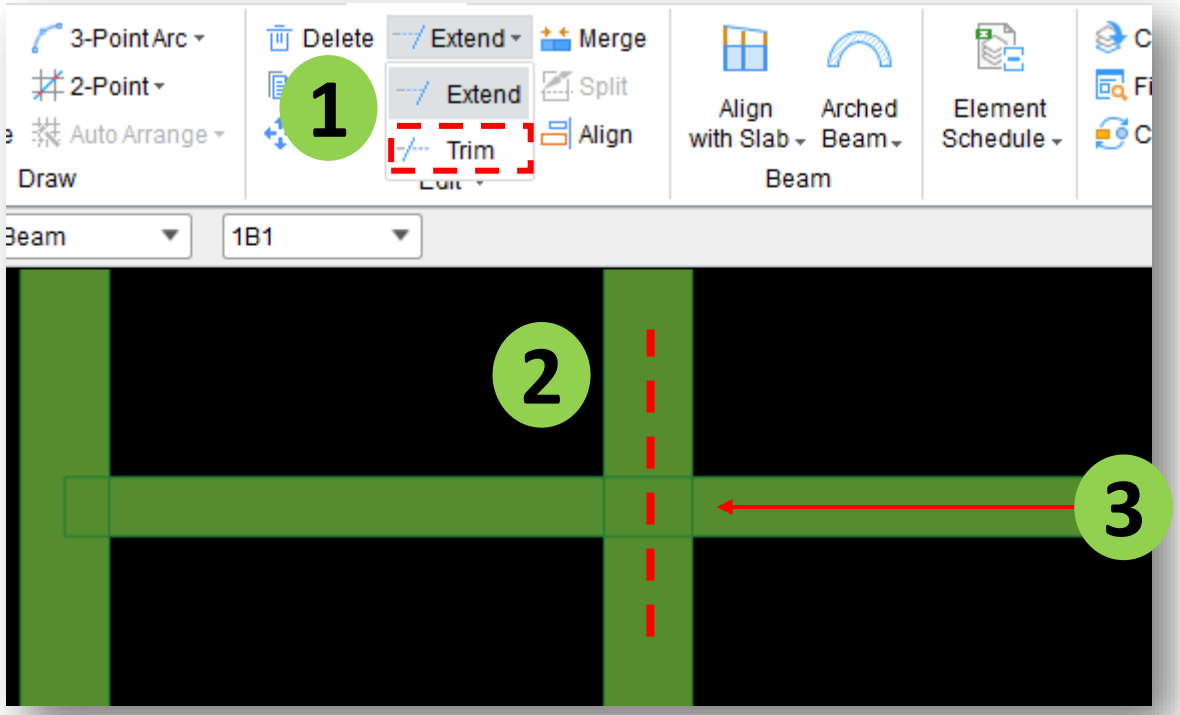
- Step 1: Tab {Draw}, Click [Extend]
- Step 2: Choose target line
- Step 3: Click on selected beam/ wall



5.4b Draw Beam (cont'd)

To Trim beam/ wall

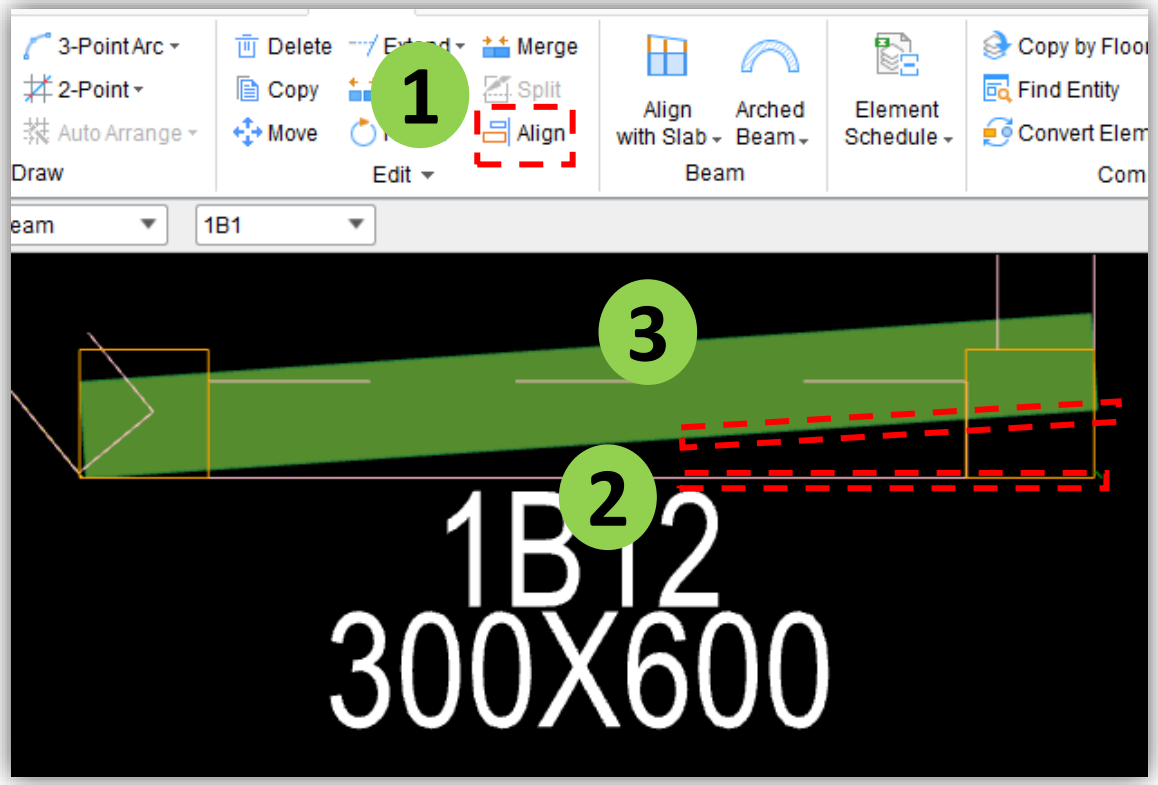
- Step 1: Tab {Draw}, Click [Trim]
- Step 2: Choose target line
- Step 3: Click on redundant beam/ wall



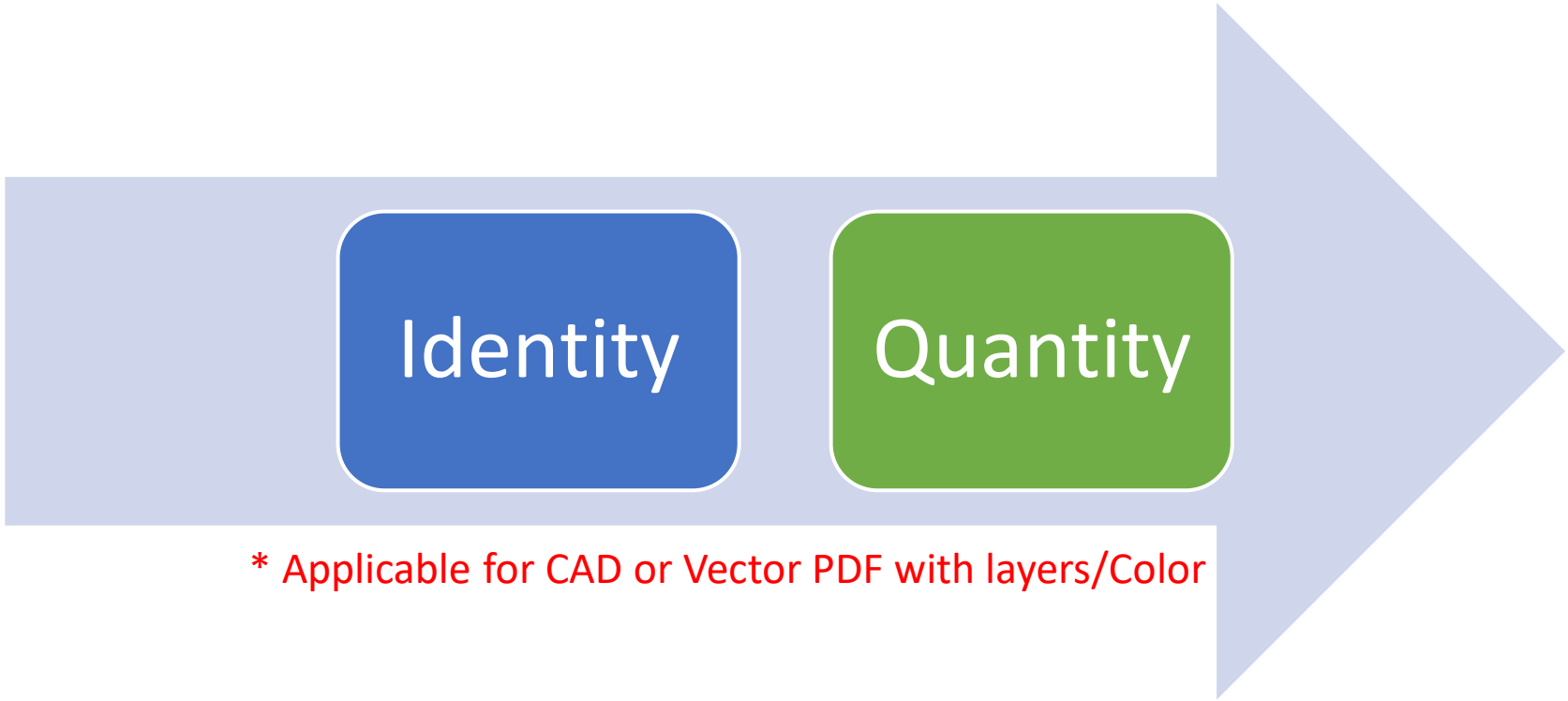
5.4b Draw Beam (cont'd)

To align beam/ wall

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

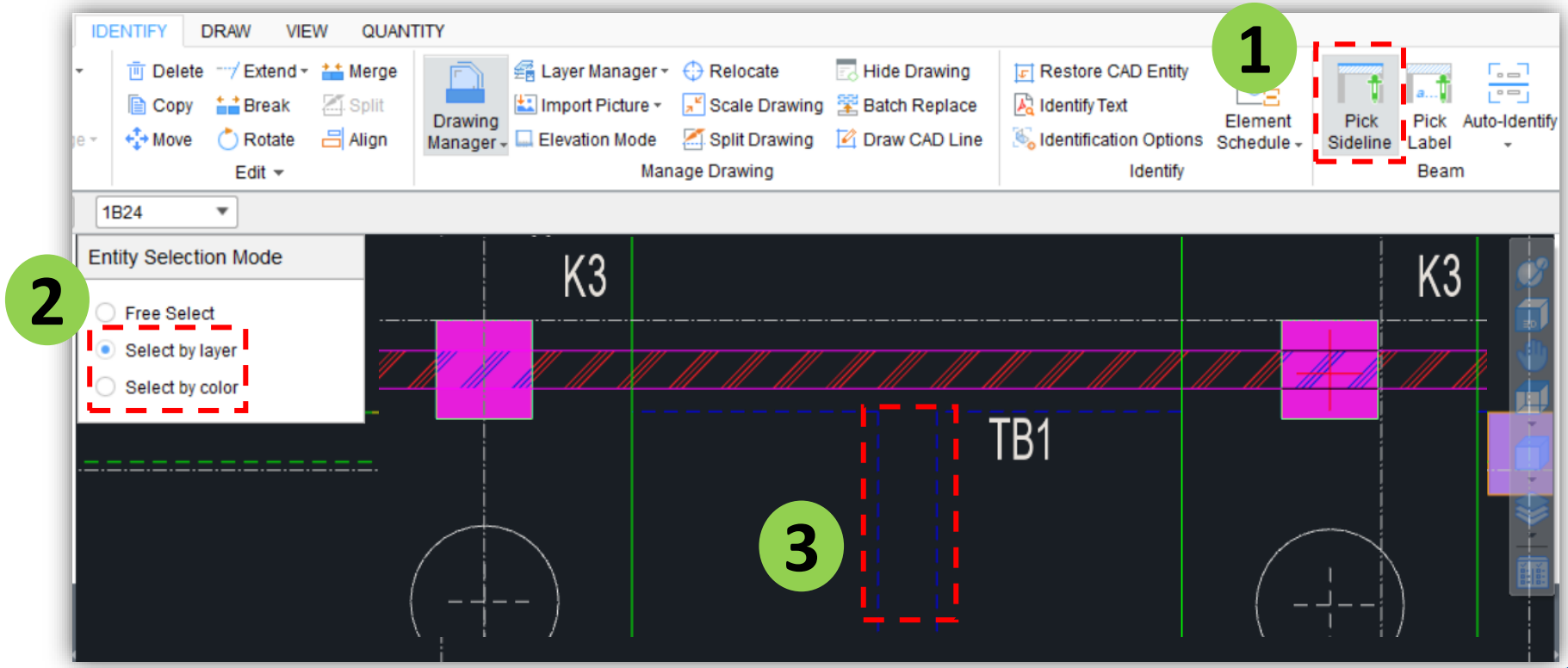


5.4(ii) Beam (Option 2)



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

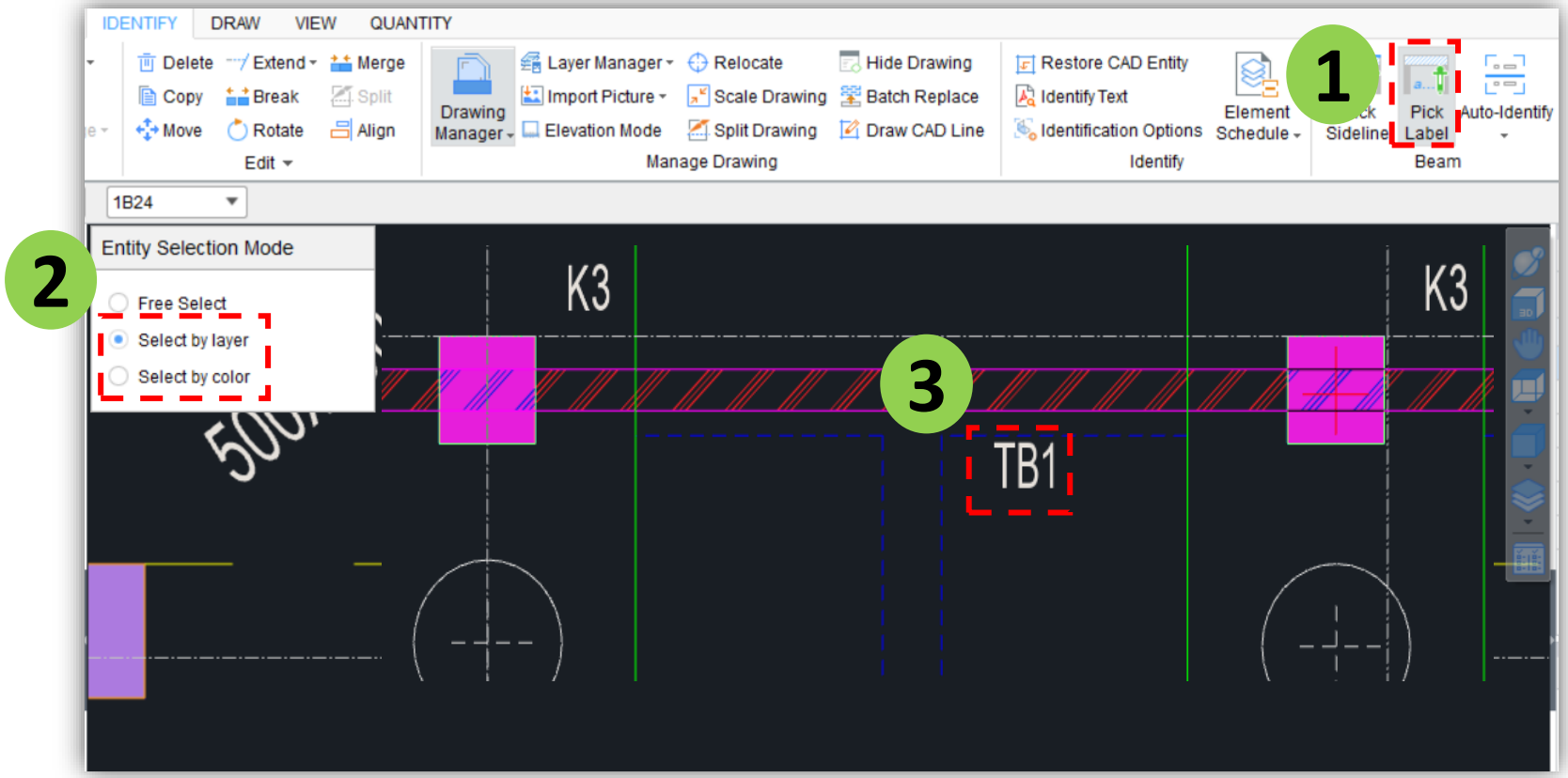


Continue →

cubiCost by Glodon

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

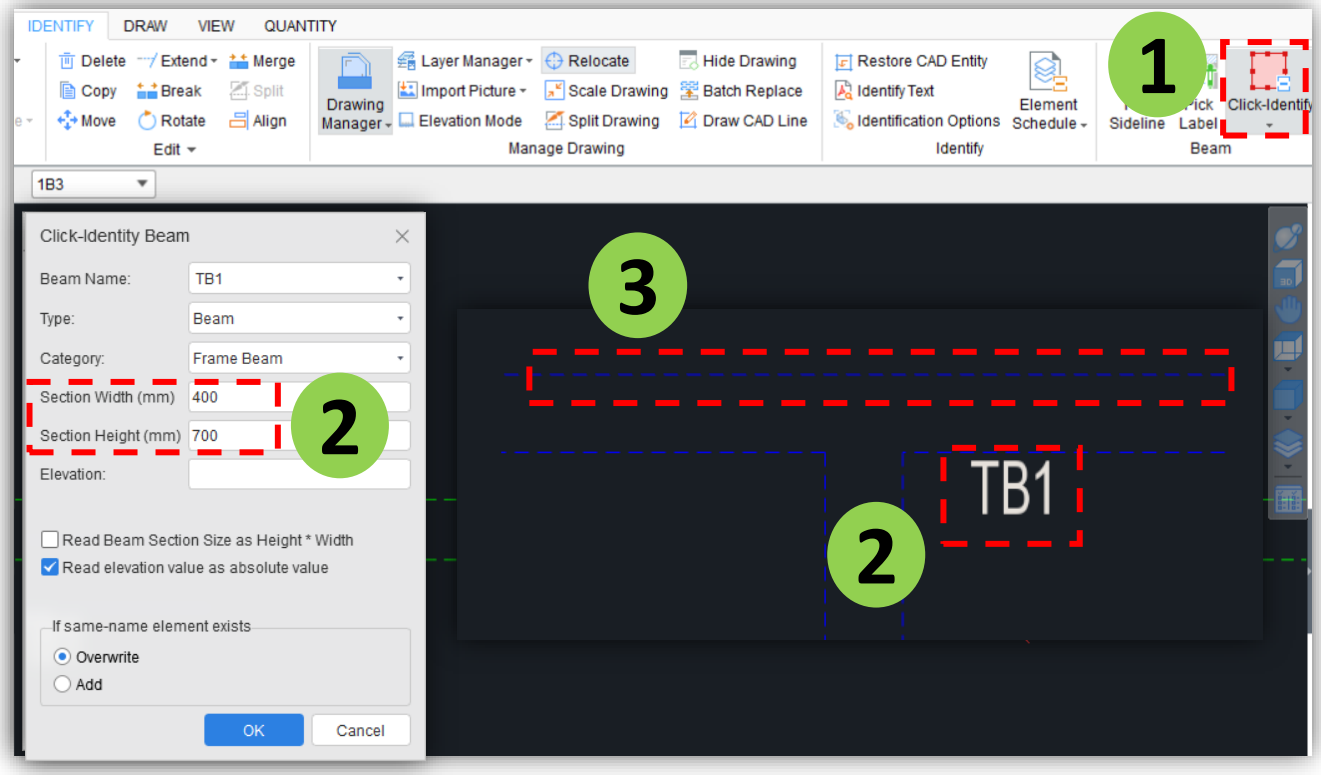


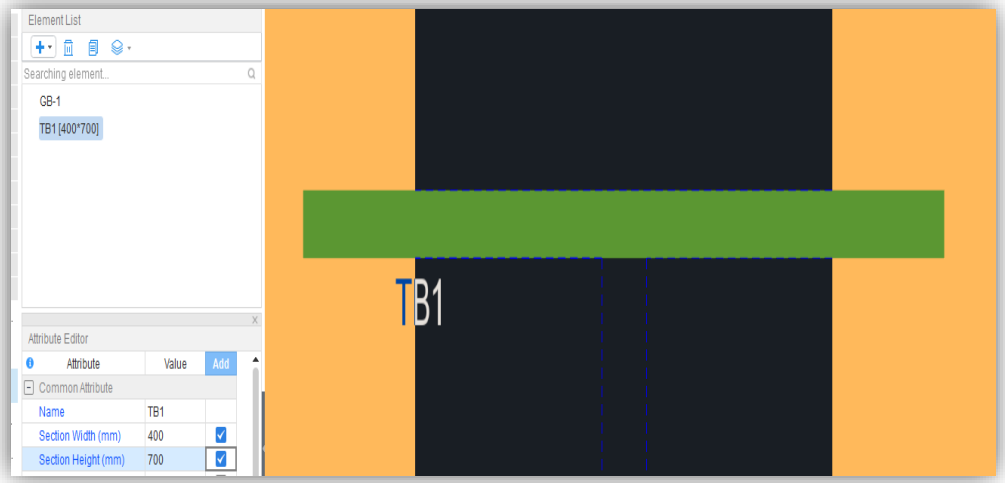
Continue →

cubiCOST by Glodon

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

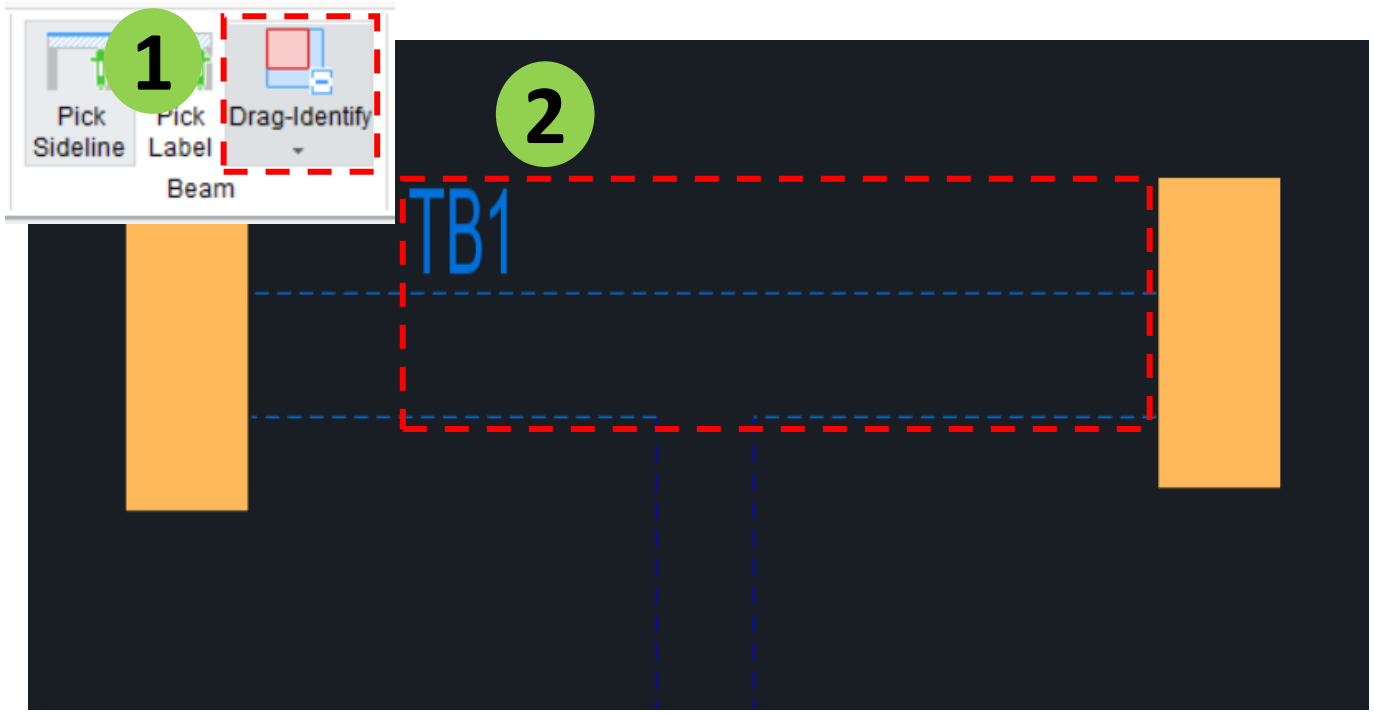
- Step 1: Tab {Identify}, Select [Click-Identify]
- Step 2: Select the beam name &input beam size, right click
- Step 3: Select the beam sideline, right click

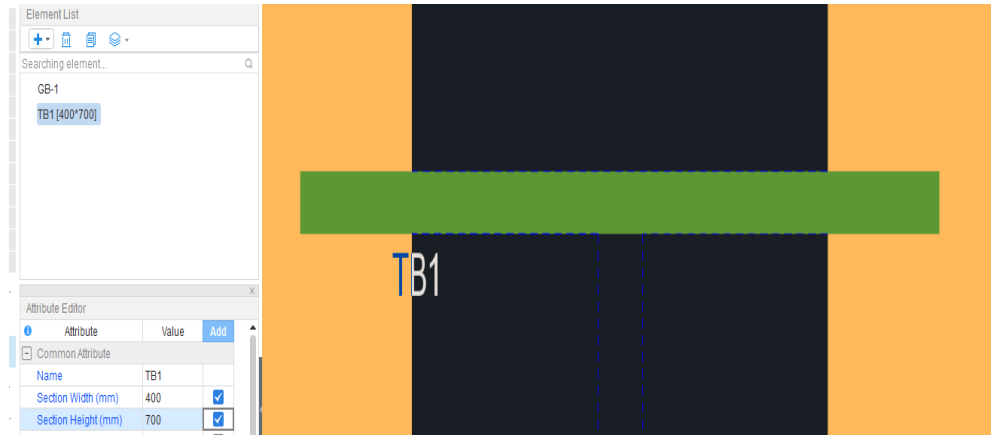




5.4(ii) Identify Beam – By [Drag-Identify] Selected area

- 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

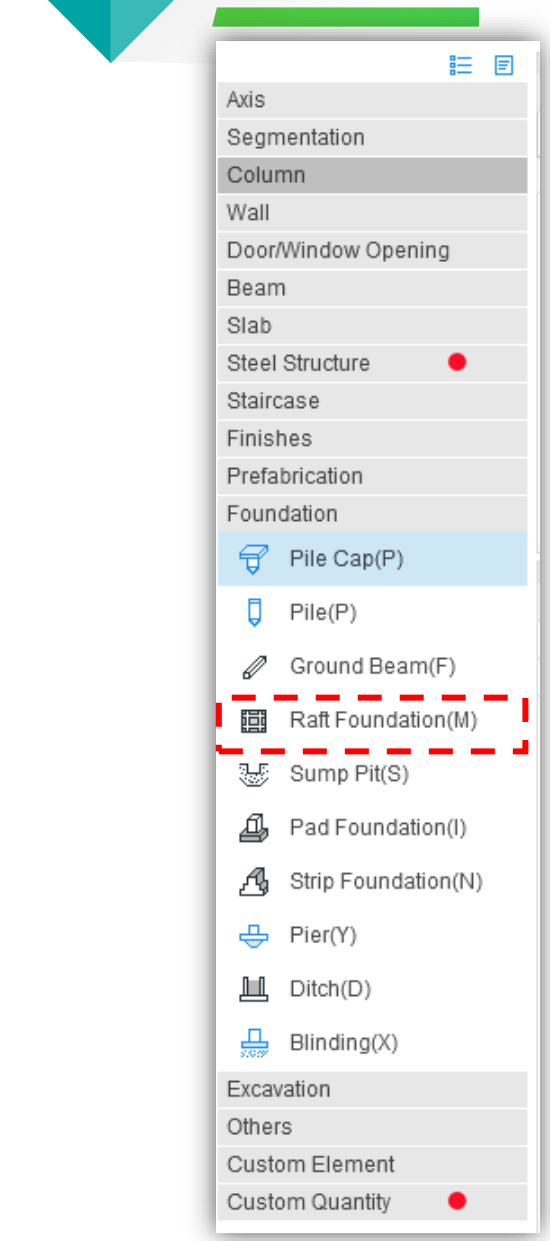
Notes:

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;

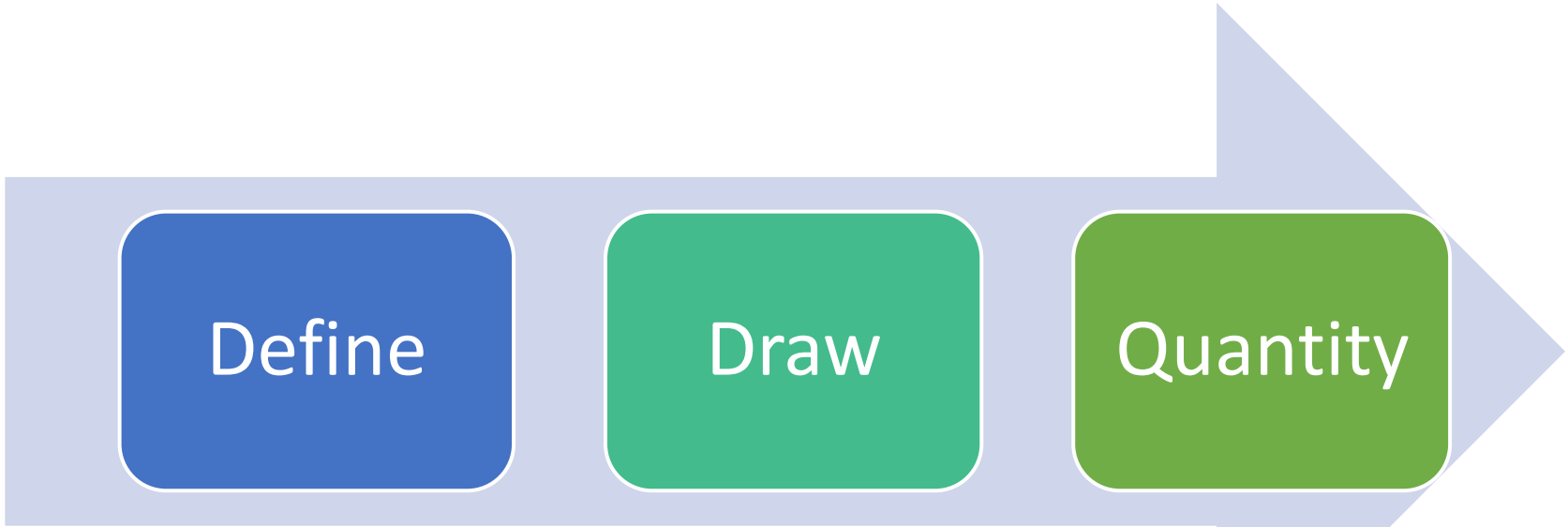
	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	1.481<Original volume>-0.040<Deduct raft foun...	1.441	m3
2	Area of formwork to side	(0.500<Height>*7.403<Length of centerline>*2)+0.200<Original area of formwork...	7.003	m2
3	Area of formwork to soffit	(0.400<Width>*7.403<Length of centerline>)-0.080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

Area Type



Raft Foundation

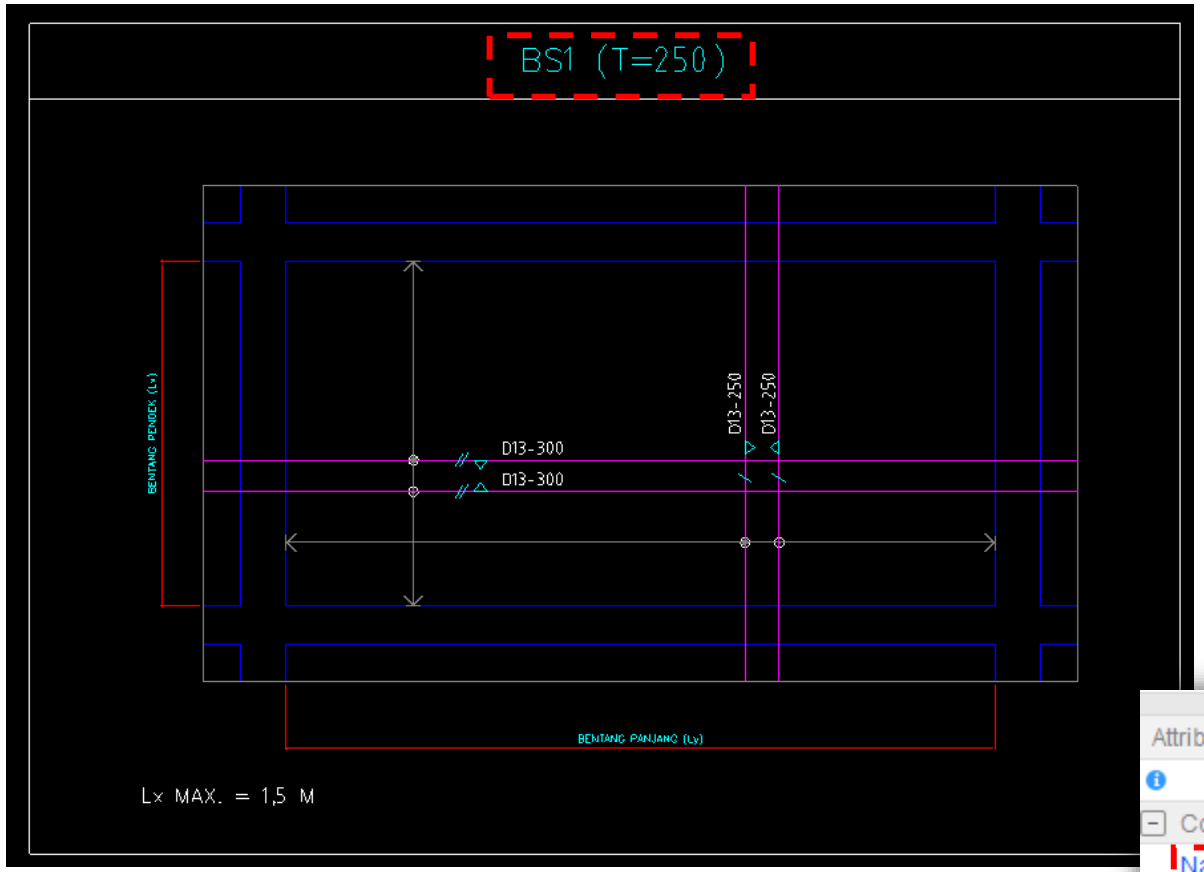
5.8 Raft Foundation



- Name
- Thickness

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

Define Raft Foundation

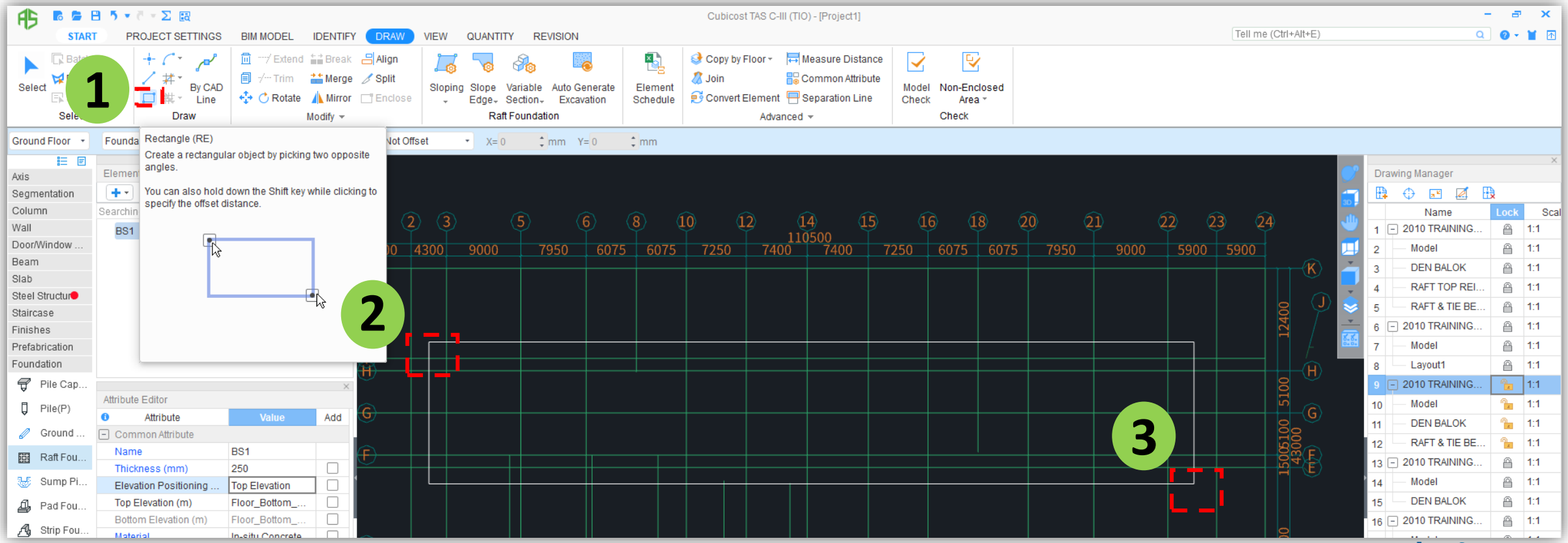


Attribute Editor

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)	☐

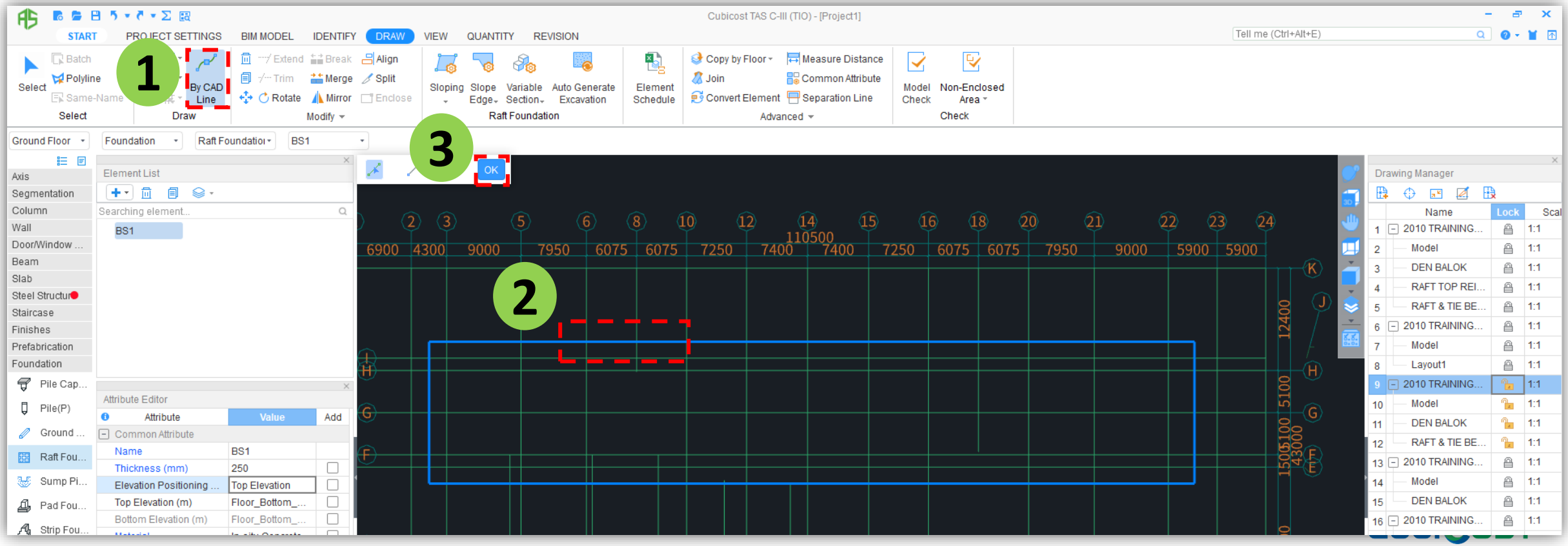
Draw Raft Foundation -Rectangle

- 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

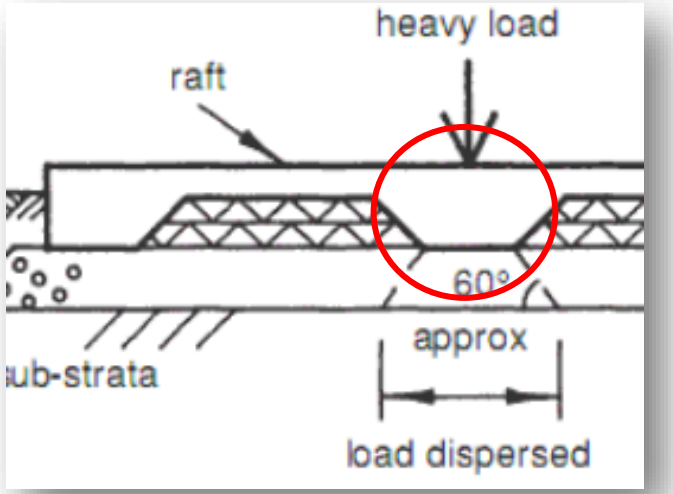
- Step 1: Tab {Draw}, Click [By CAD Line], generate entities by picked CAD lines.
- Step 2: Select CAD drawing lines to form a closed area
- Step 3: Click[OK]

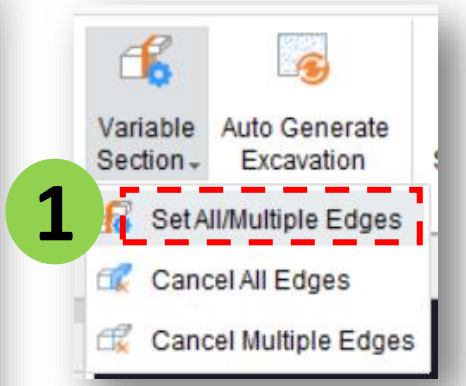


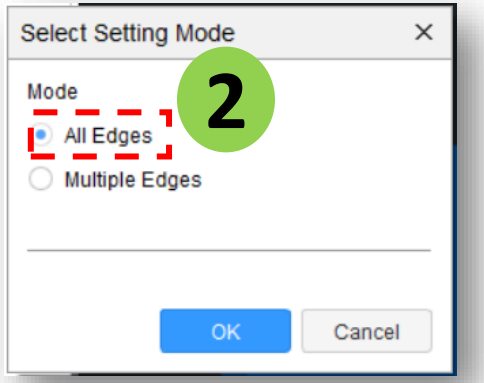
5.8b Draw Raft

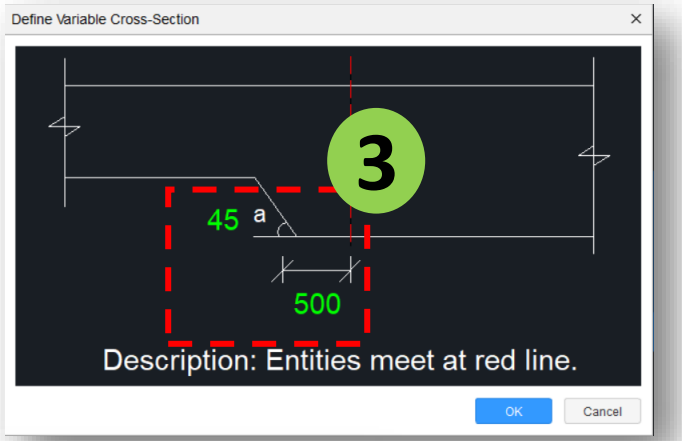
To do cross section

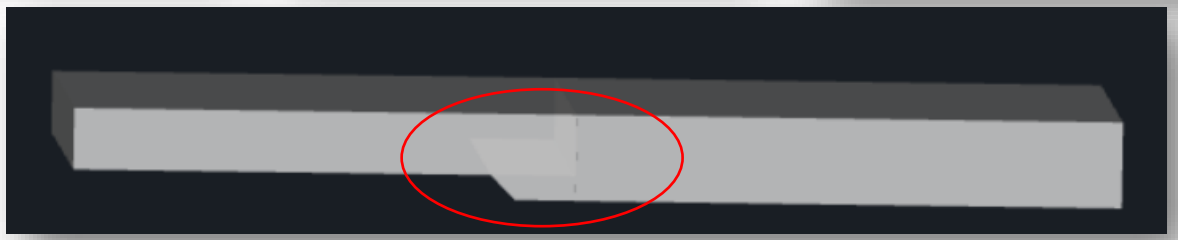
- Step 1: Tab {Draw}, Select [Variable Section] follow by [Set All/ Multiple Edges]
- Step 2: Choose [All Edge] to do the cross section for all INTERSECTED edges
- Step 3: Input the details and click Ok







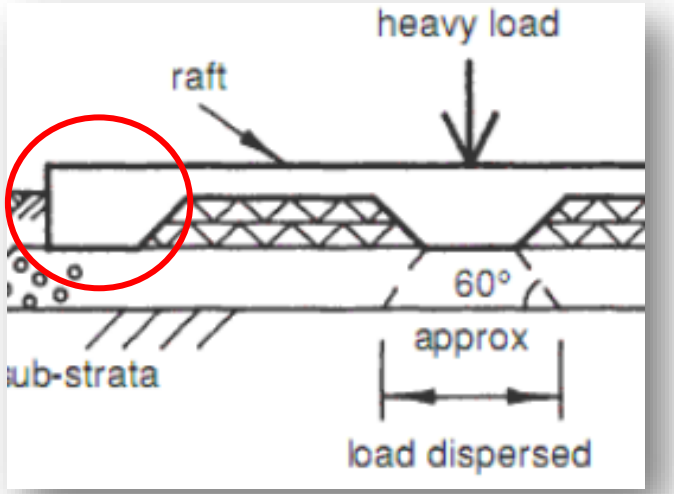


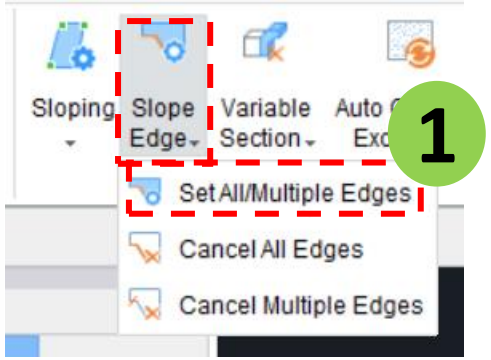


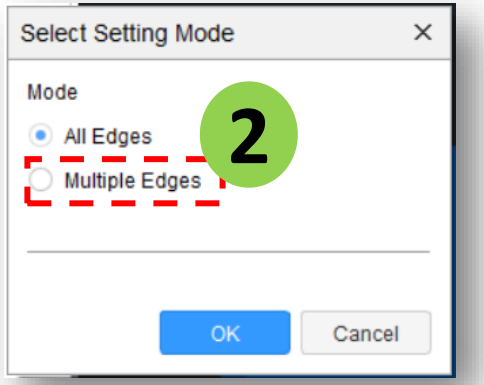
5.8b Draw Raft

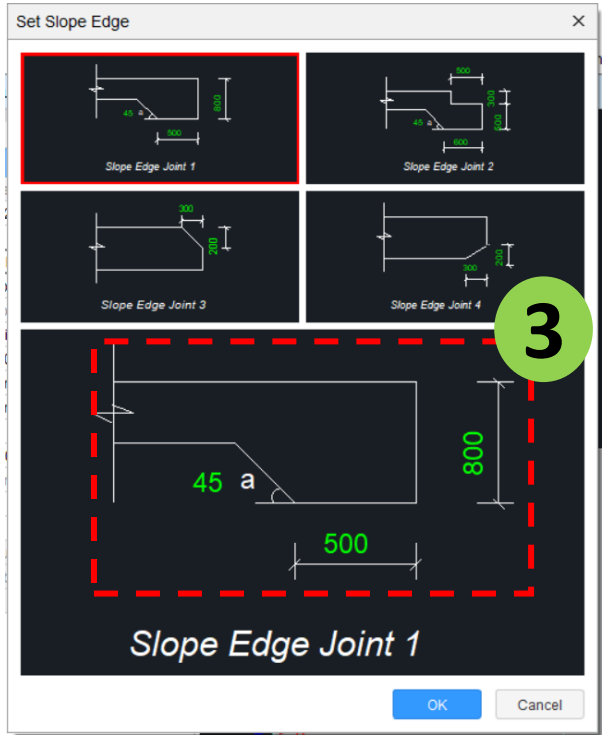
To do raft thickening

- 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

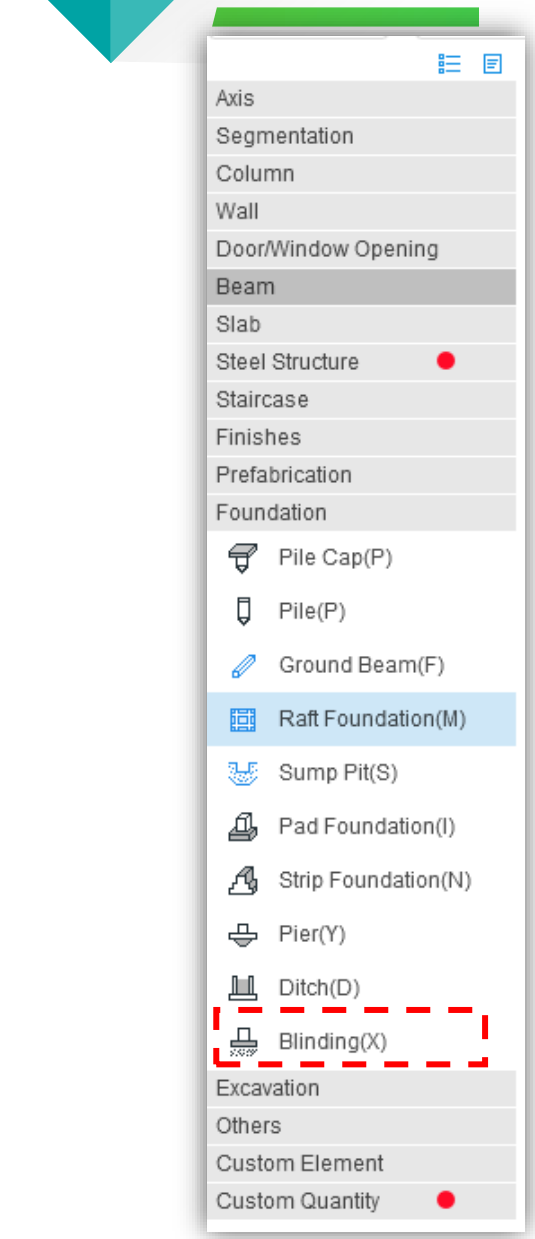
Notes:

Which quantity to extract for RAFT FOUNDATION

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

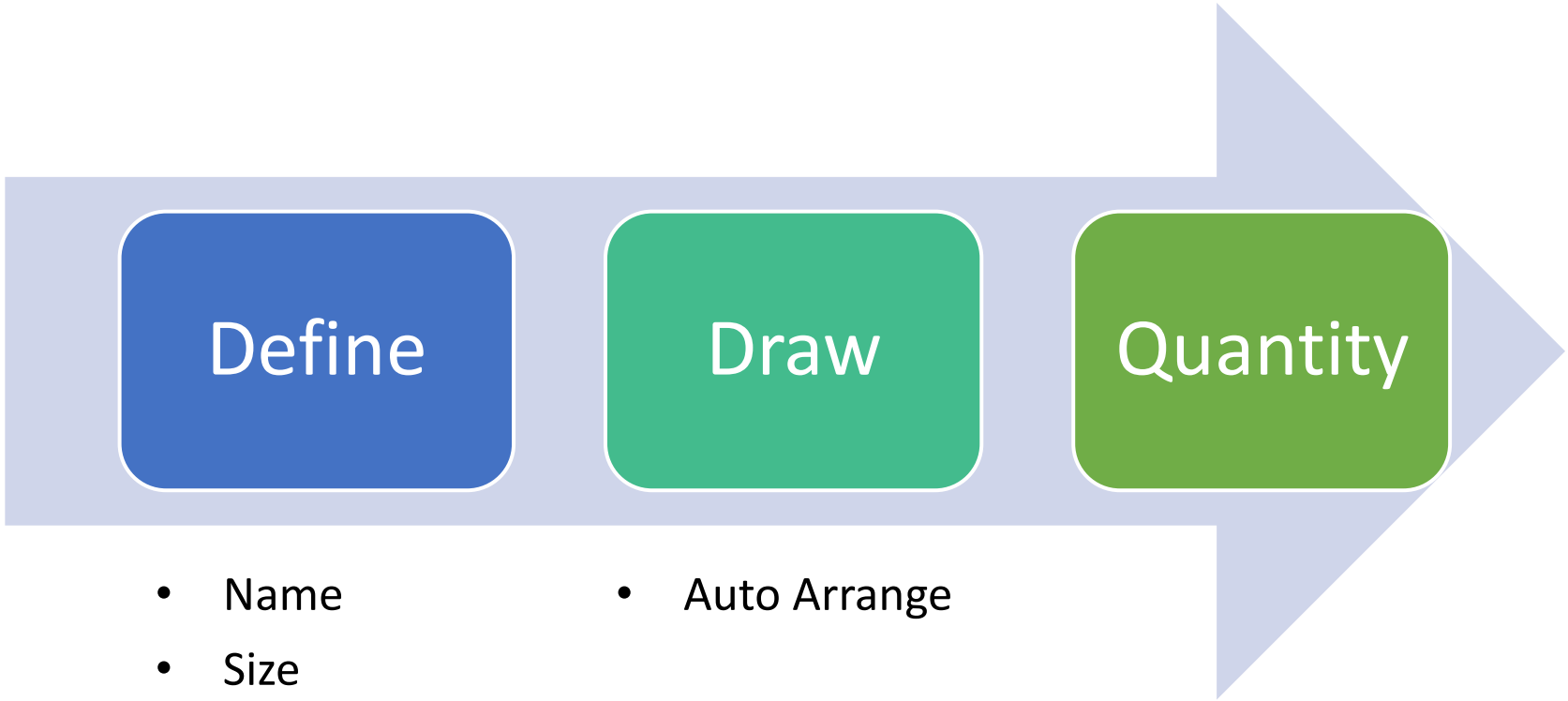
	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	(92.776<Length>*17.196<Width>)*0.250<Thickness>	398.842	m3
2	Area of formwork	54.986<Original area of formwork>	54.986	m2
3	Area of soffit	92.776<Length>*17.196<Width>	1595.366	m2
4	Area of vertical surface	((92.776<Length>+17.196<Width>)*2)*0.250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

Area Type



Blinding

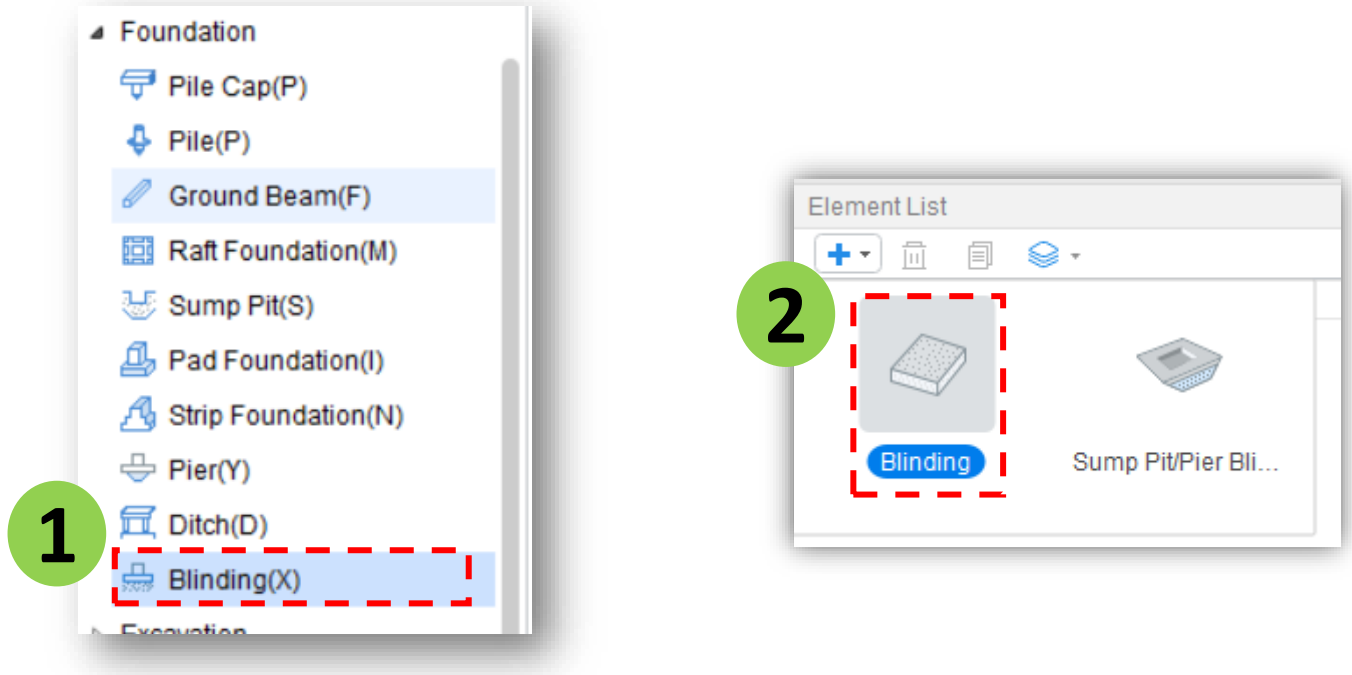
5.10 Blinding



5.10 Blinding

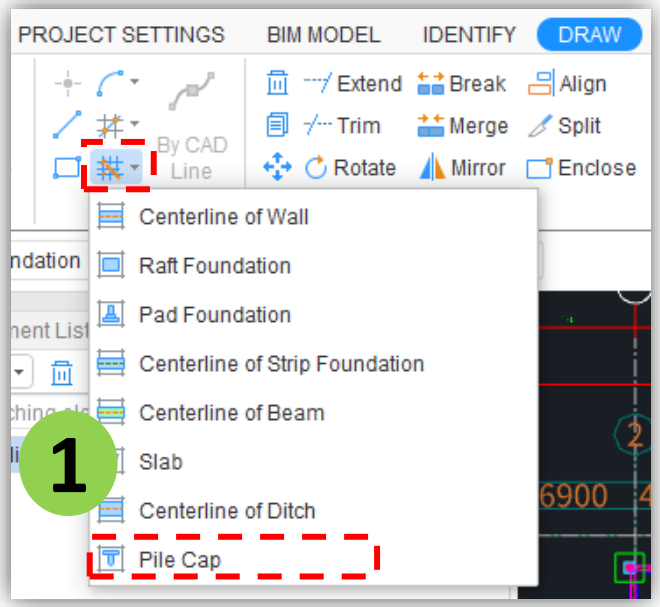
5.10a Define Blinding

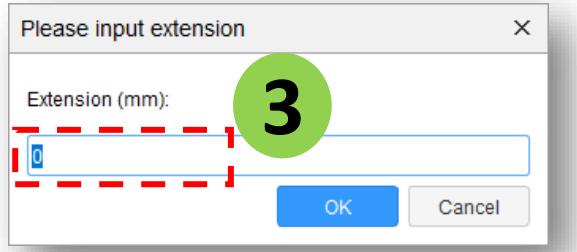
- Step 1: Tab {Draw}, Select [Blinding] in Element List
- Step 2: Define a [New Blinding]



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



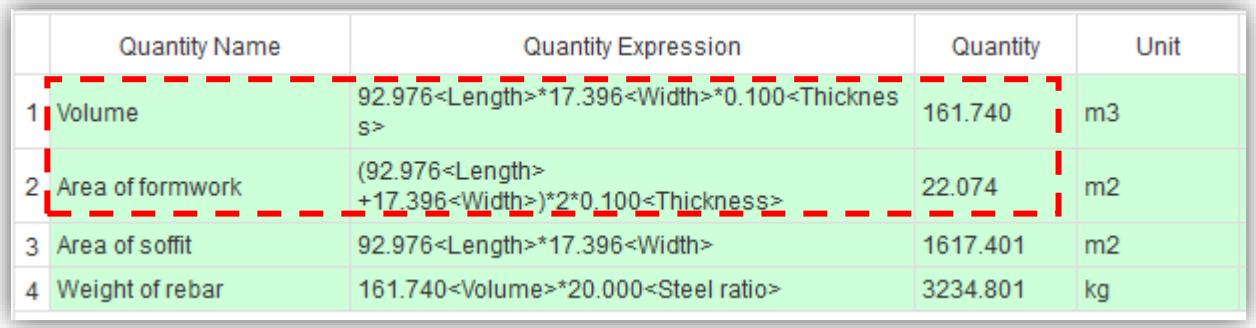


5.4c Quantity of Blinding

Notes:

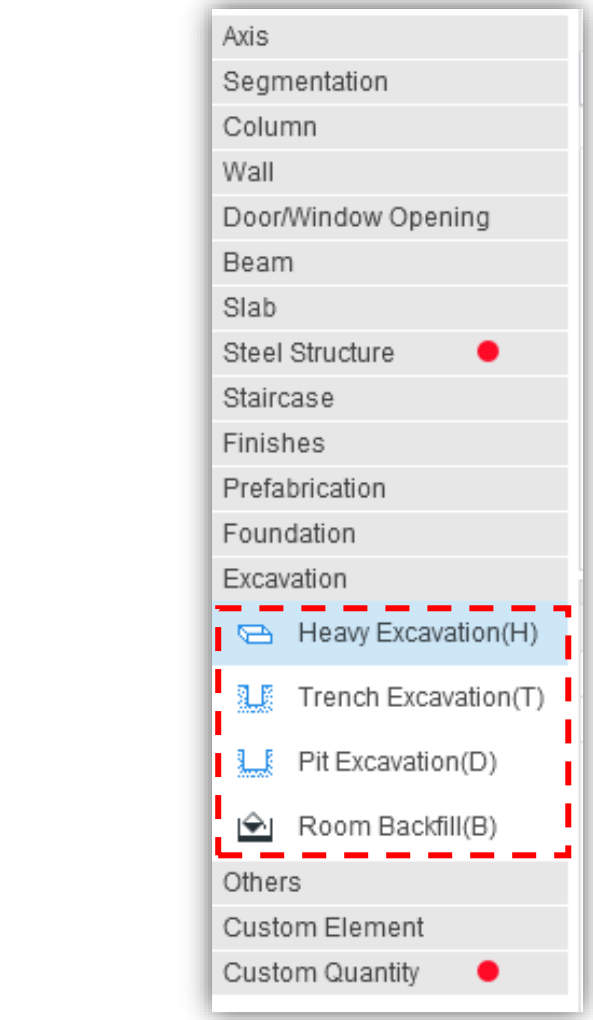
Which quantity to extract for BLINDING

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



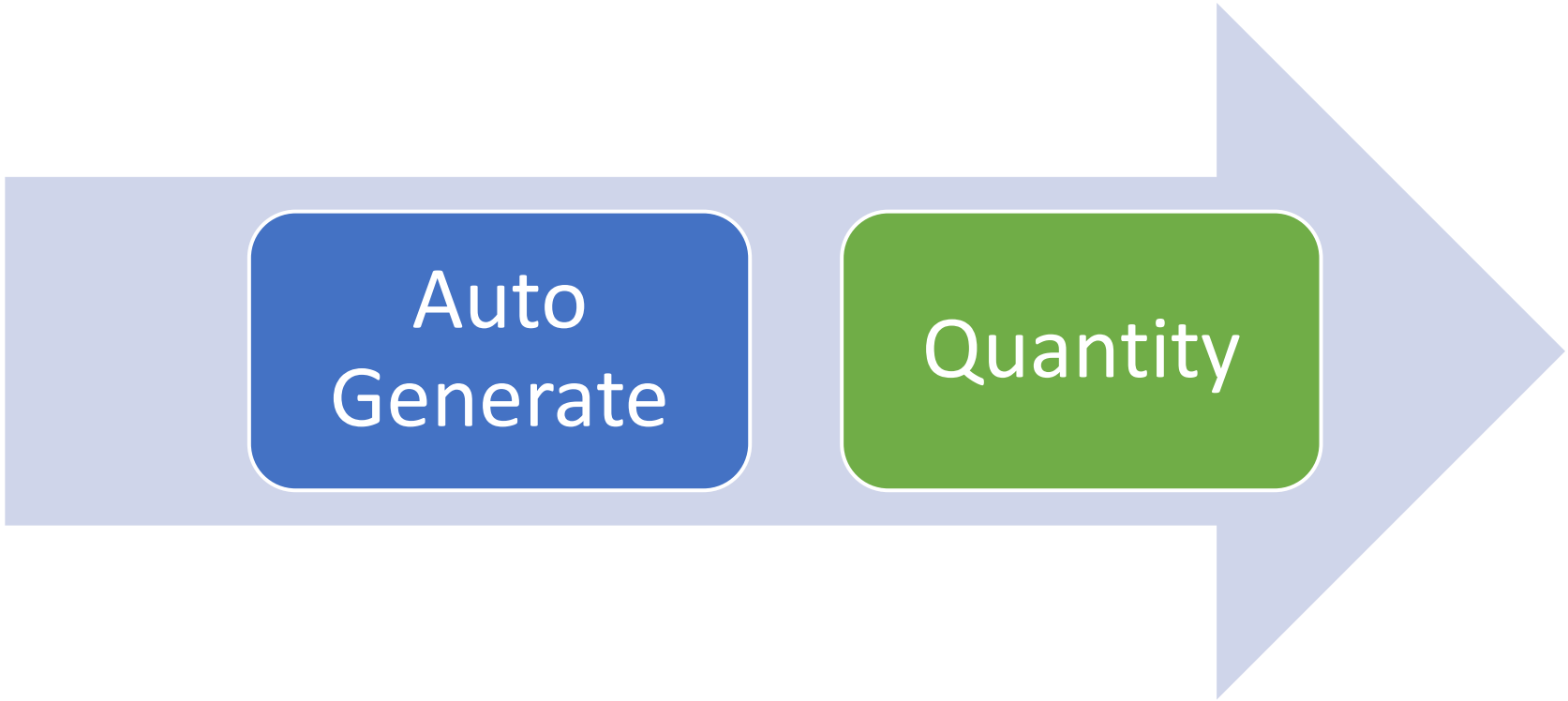
	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	92.976<Length>*17.396<Width>*0.100<Thickness>	161.740	m3
2	Area of formwork	(92.976<Length> +17.396<Width>)*2*0.100<Thickness>	22.074	m2
3	Area of soffit	92.976<Length>*17.396<Width>	1617.401	m2
4	Weight of rebar	161.740<Volume>*20.000<Steel ratio>	3234.801	kg

Area Type



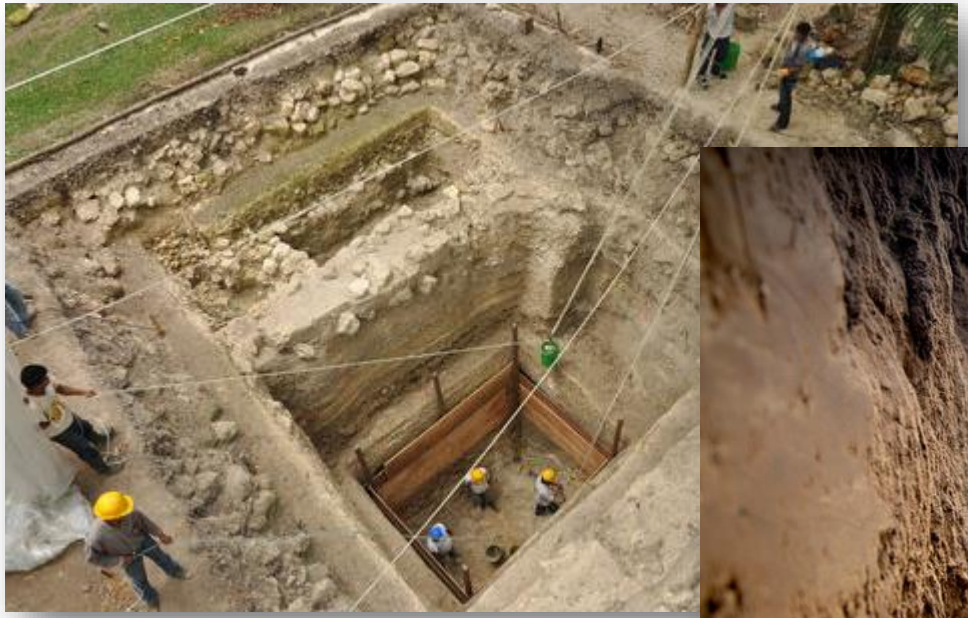
Excavation

5.11 Excavation



5.11 Excavation

Type of Excavation



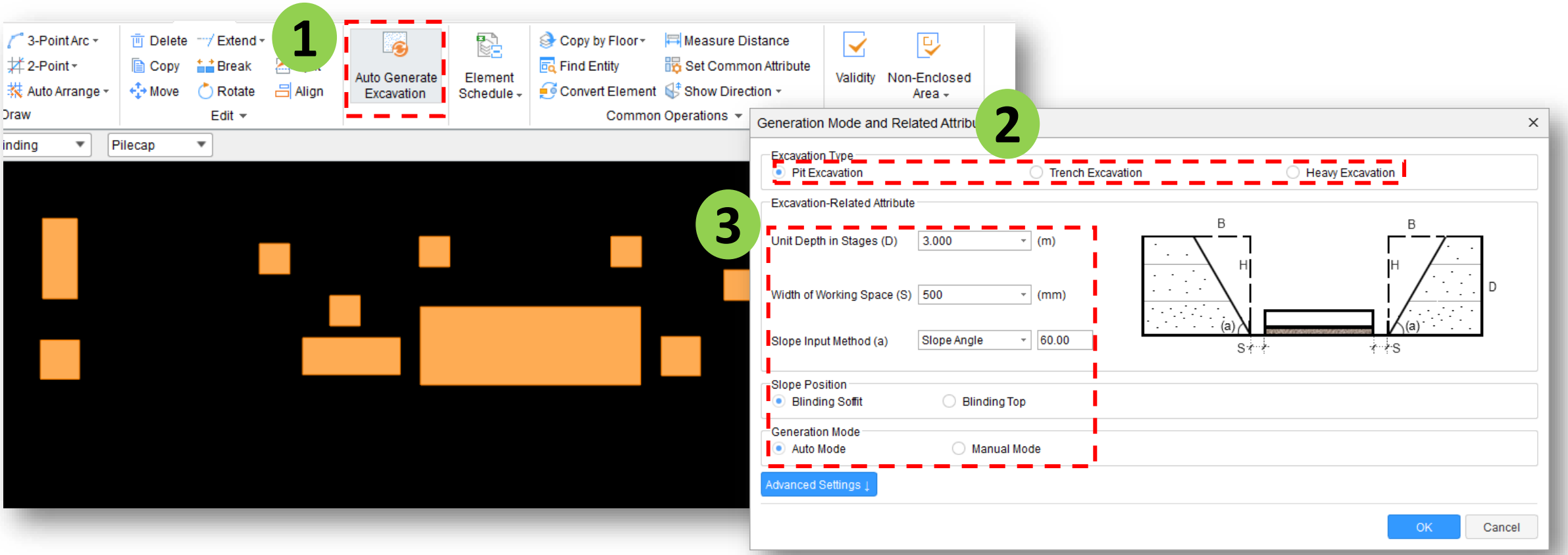
Pit Excavation

Trench Excavation

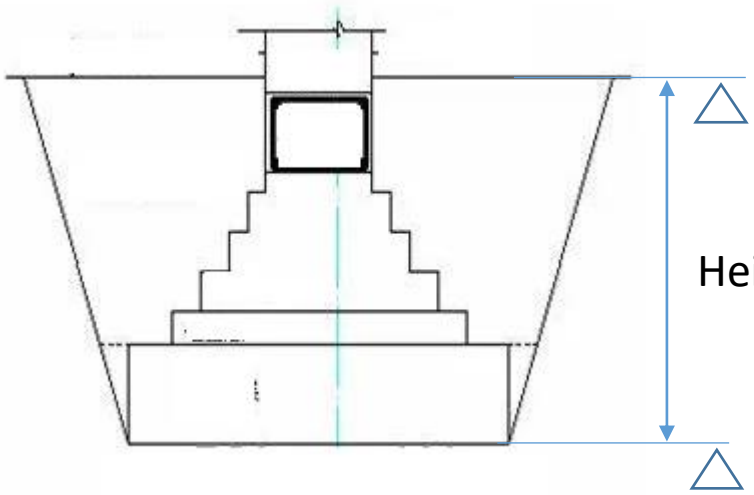
Heavy Excavation

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



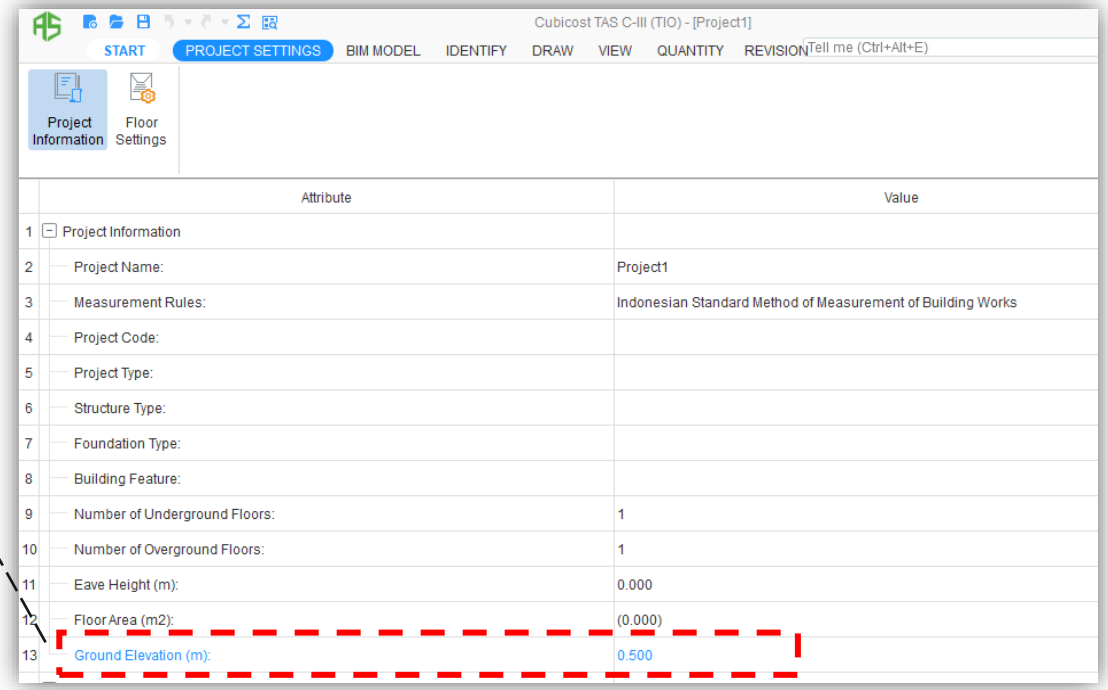
5.11a Generate Excavation



Ground elevation

Height of elevation

Bottom elevation of Blinding/Foundation

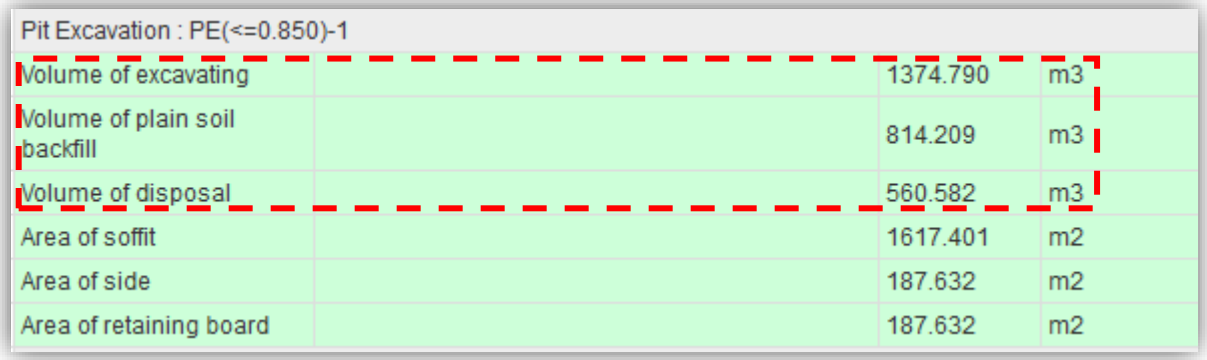


5.4c Quantity of Excavation

Notes:

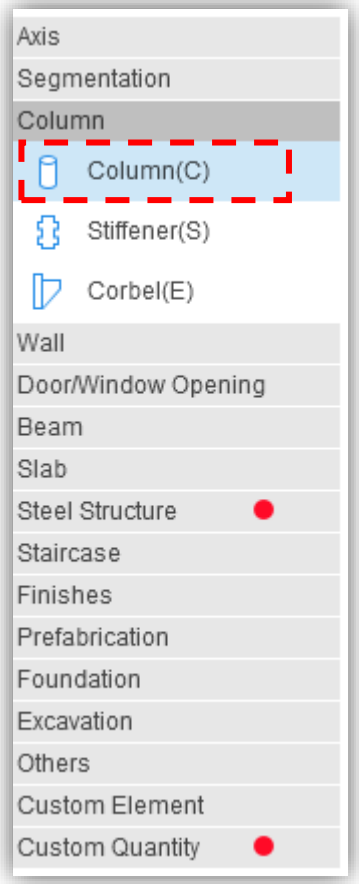
Which quantity to extract for EXCAVATION

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



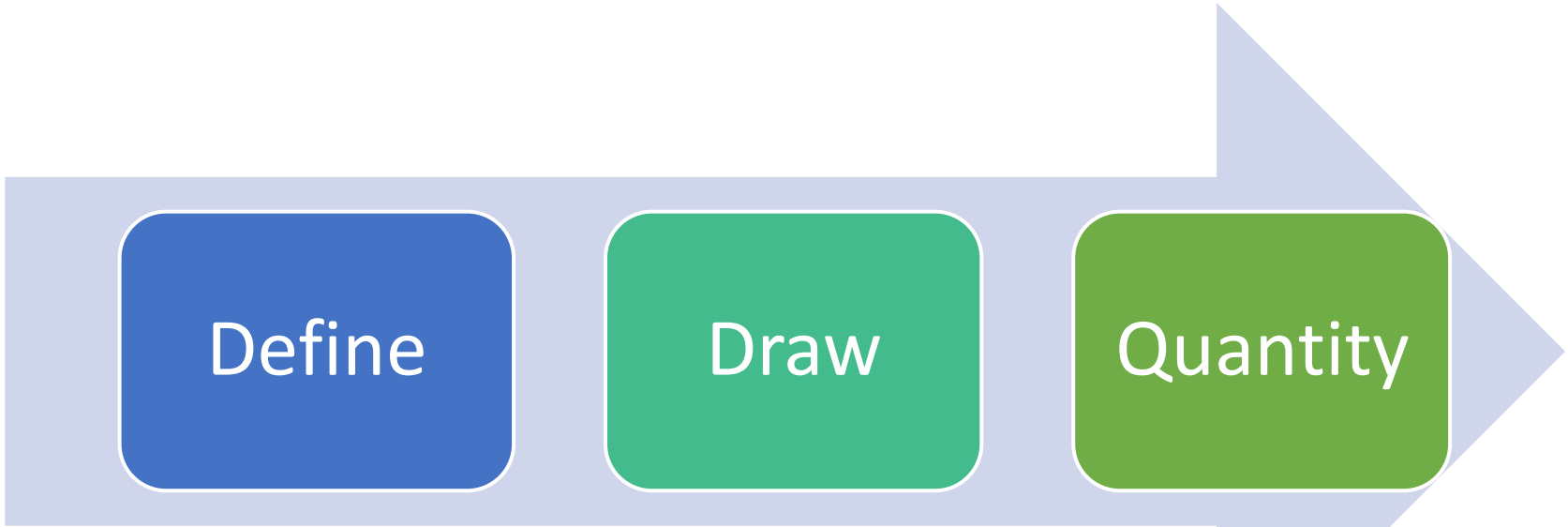
Pit Excavation : PE(<=0.850)-1			
Volume of excavating		1374.790	m3
Volume of plain soil backfill		814.209	m3
Volume of disposal		560.582	m3
Area of soffit		1617.401	m2
Area of side		187.632	m2
Area of retaining board		187.632	m2

Point Type



Column

5.1(i) Column (Option 1)



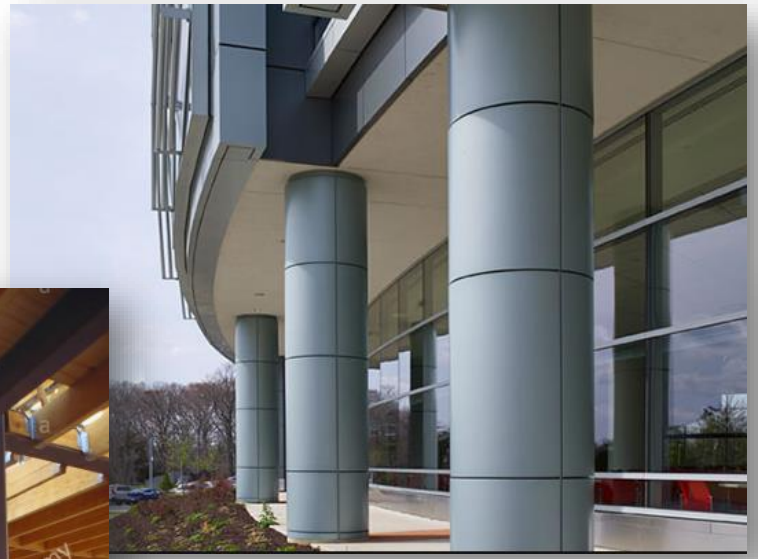
- Name
- Sizes
- Material

- Point
- Rotation Point
- Slanted Column

* F4 to change insert point

5.1 Column

Type of Column



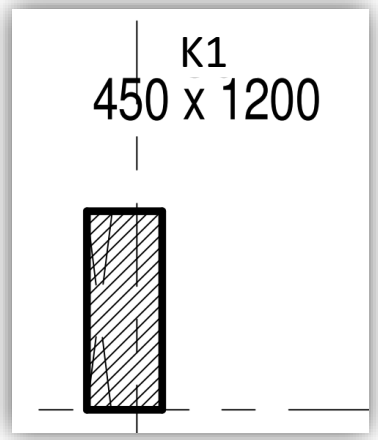
Round Column

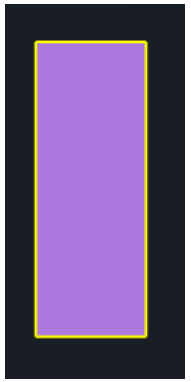
Composite Column

Steel Column

Slanted Column

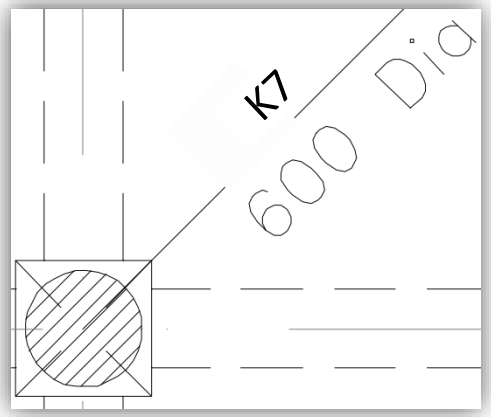
5.1a Define Column

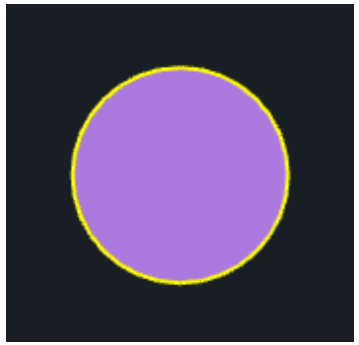




Attribute Editor

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)	





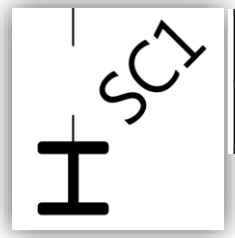
Attribute Editor

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)	

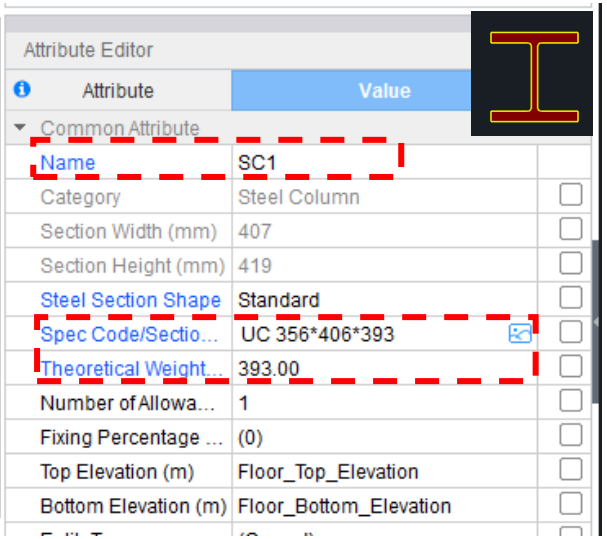
Rectangular Column

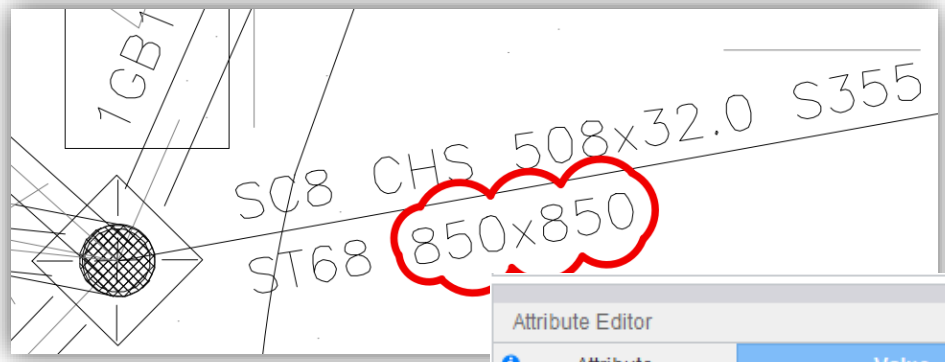
Round Column

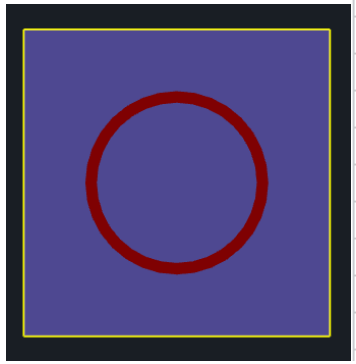
5.1a Define Column (cont'd)

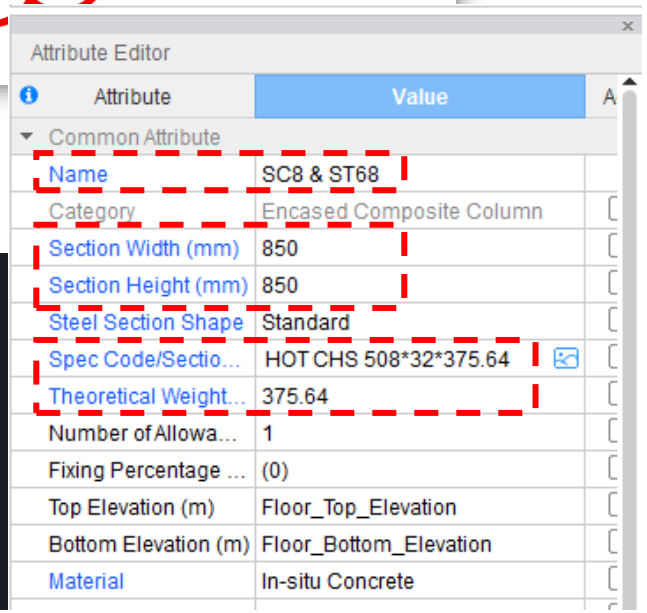


MARK	SIZE
SC1	356 x 406 x 393 kg/m UC





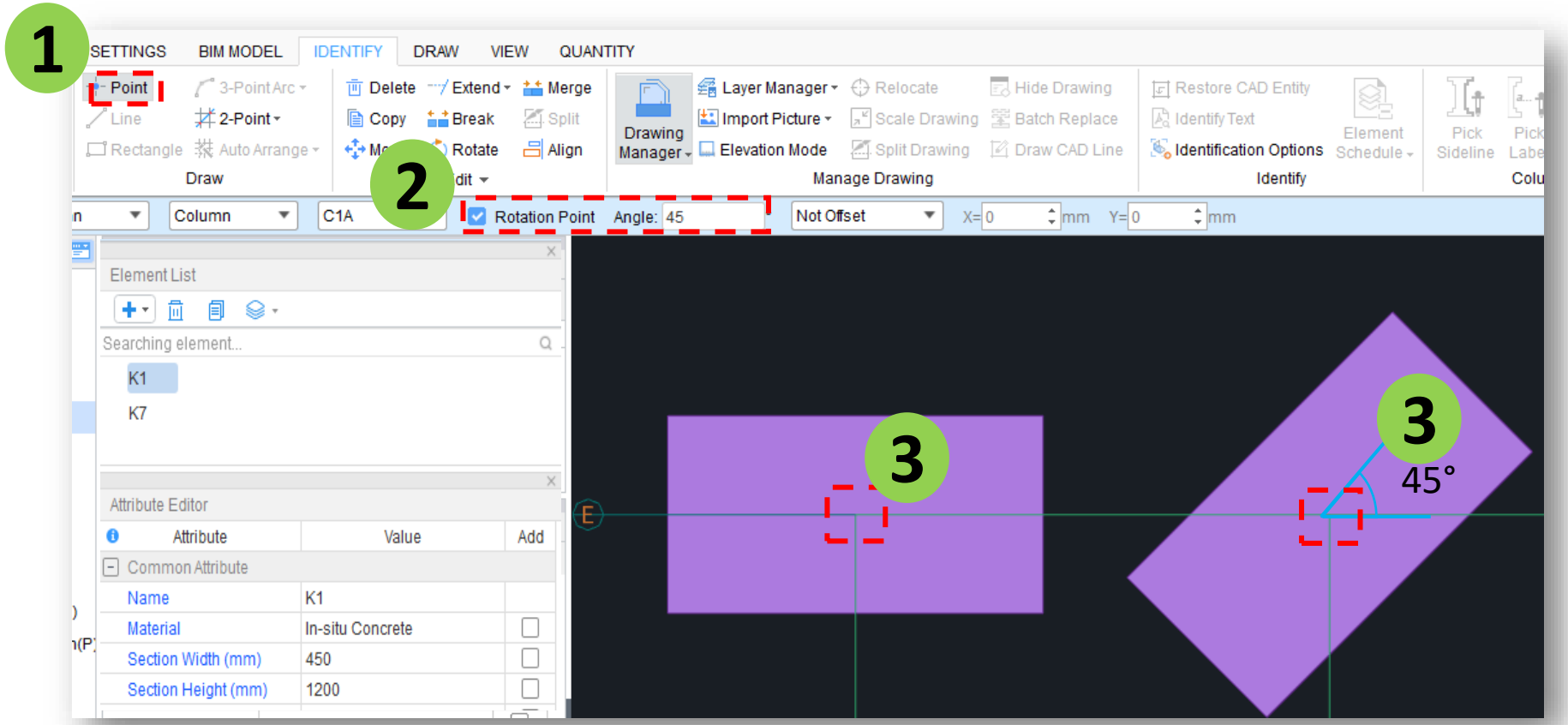




Steel Column	Composite Column

5.1b Draw Column

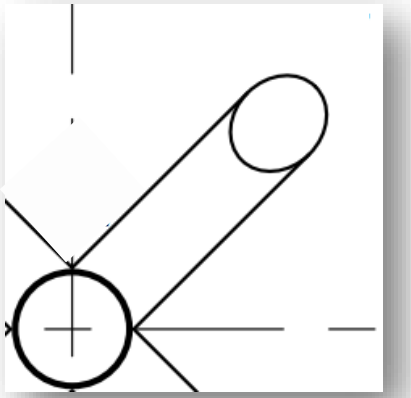
- Step 1: Tab {Draw}, Click [Point]
- Step 2: For non-right-angle column, tick on [Rotation Point] to rotate to certain degree
- Step 3: Point to the location of the column on drawing Tips: F4 to change insert point

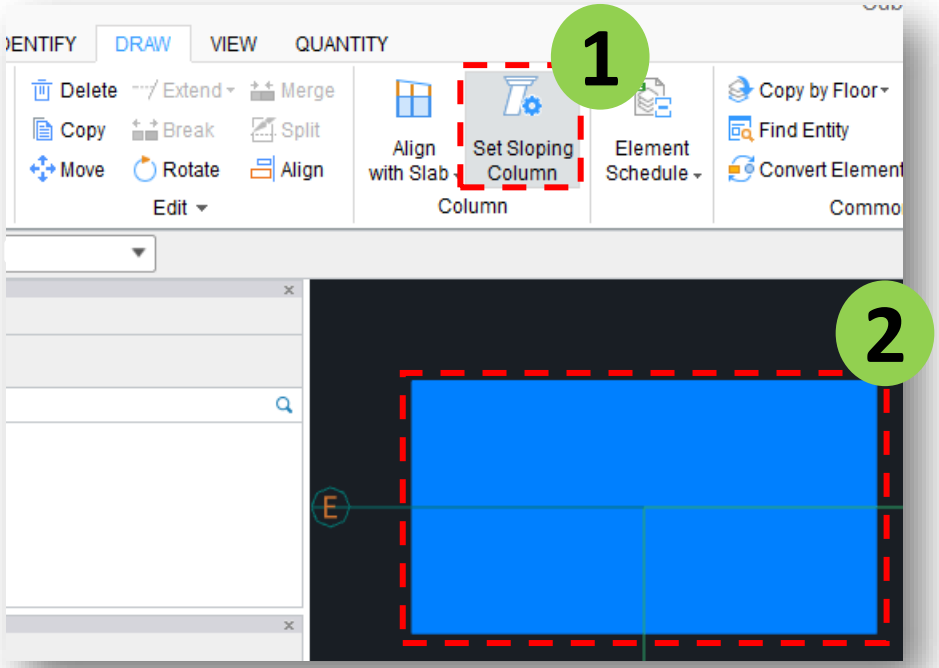


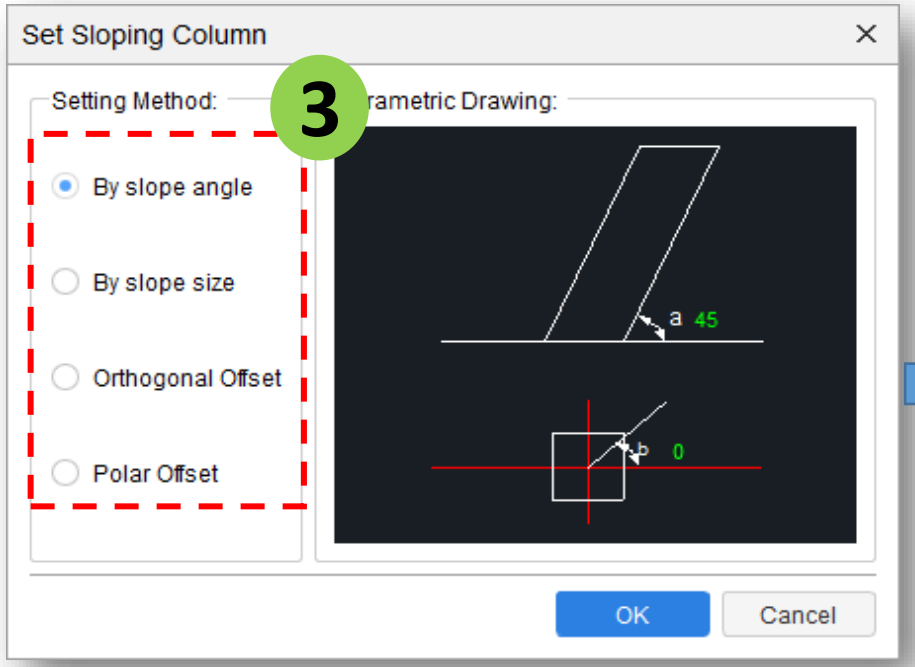
5.1b Draw Column (cont'd)

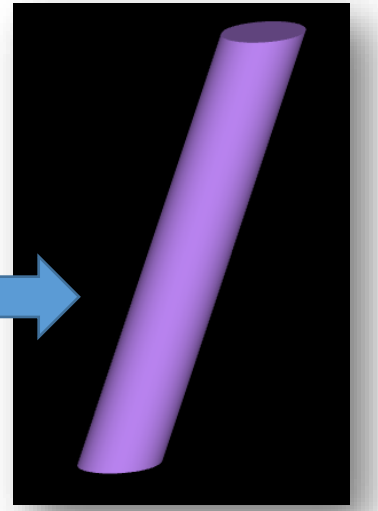
To do slanted column

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



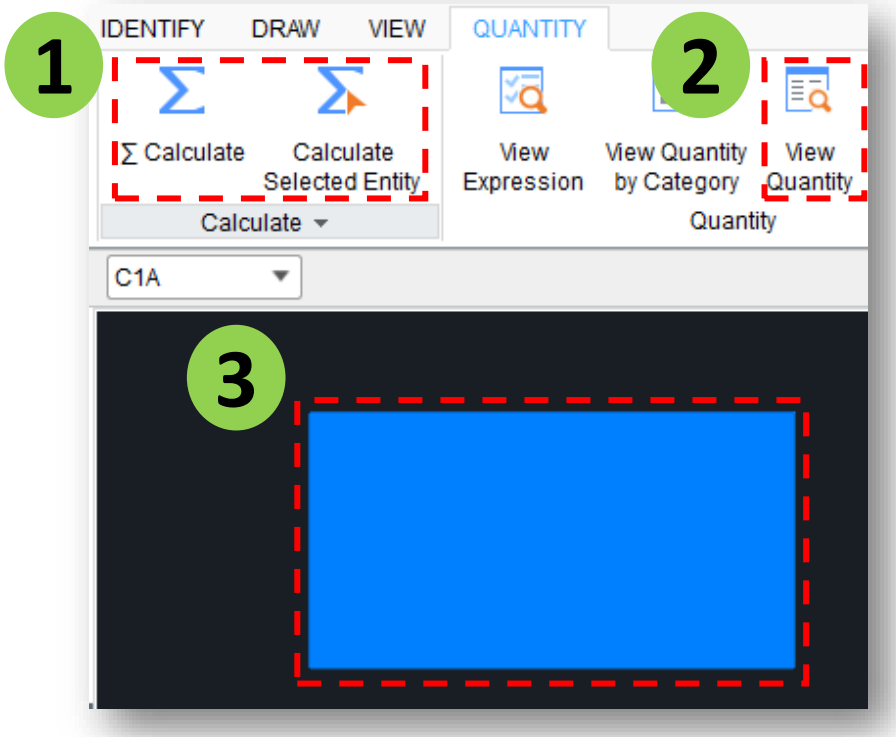


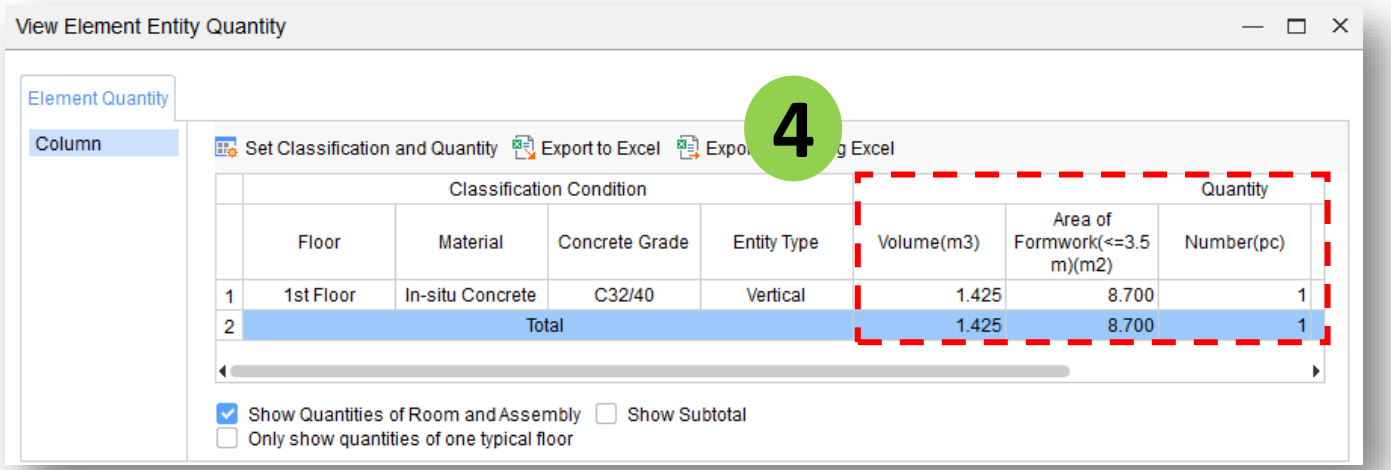




5.1c Quantity of Column

- 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



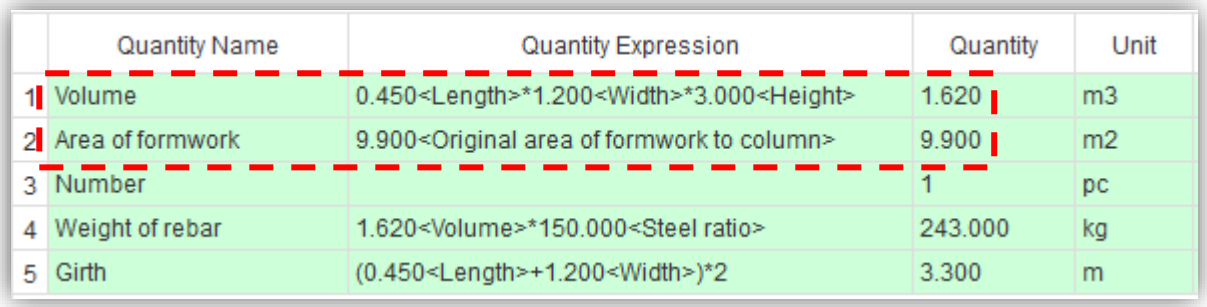


5.1c Quantity of Column (cont'd)

Notes:

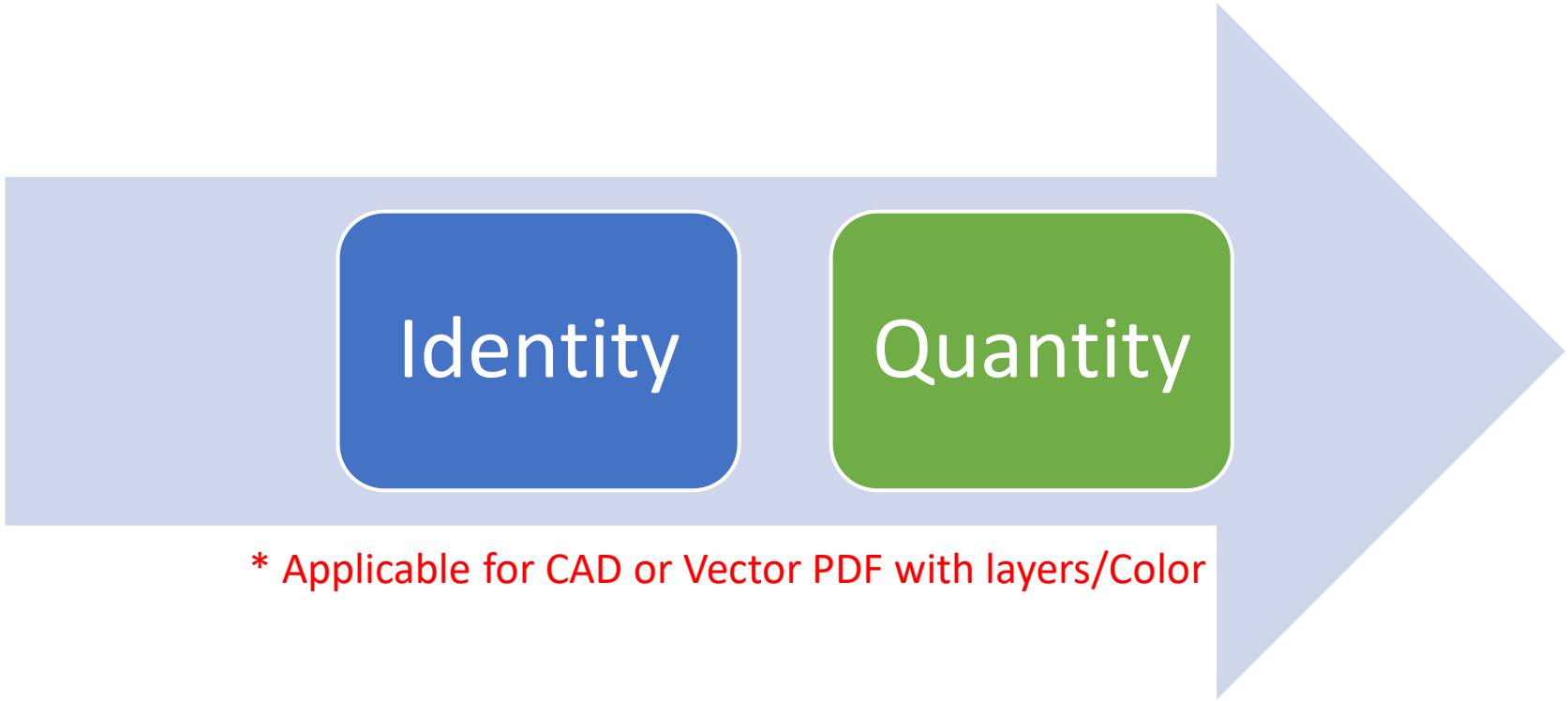
Which quantity to extract for COLUMN

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



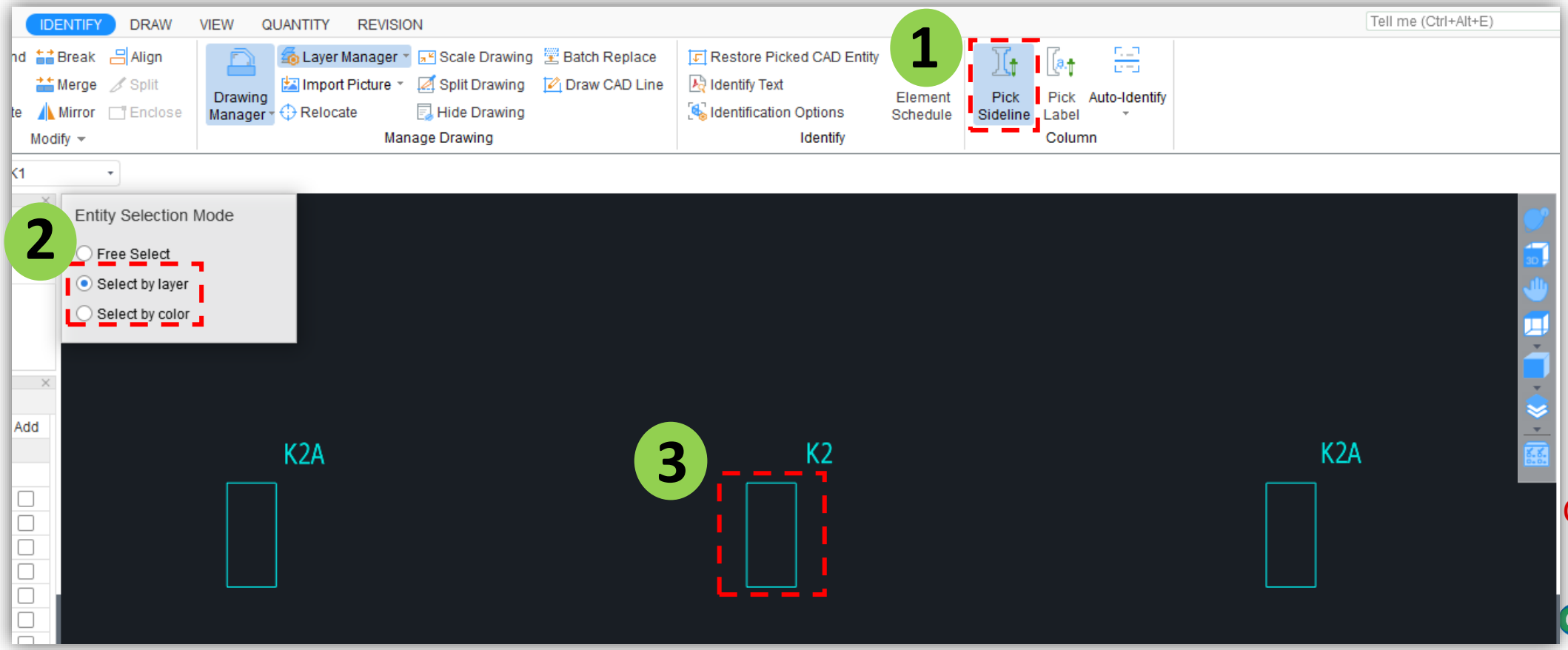
	Quantity Name	Quantity Expression	Quantity	Unit
1	Volume	0.450<Length>*1.200<Width>*3.000<Height>	1.620	m3
2	Area of formwork	9.900<Original area of formwork to column>	9.900	m2
3	Number		1	pc
4	Weight of rebar	1.620<Volume>*150.000<Steel ratio>	243.000	kg
5	Girth	(0.450<Length>+1.200<Width>)*2	3.300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

5.1(ii) Column (Option 2)



5.1(ii) Identify Column – Pick Sideline

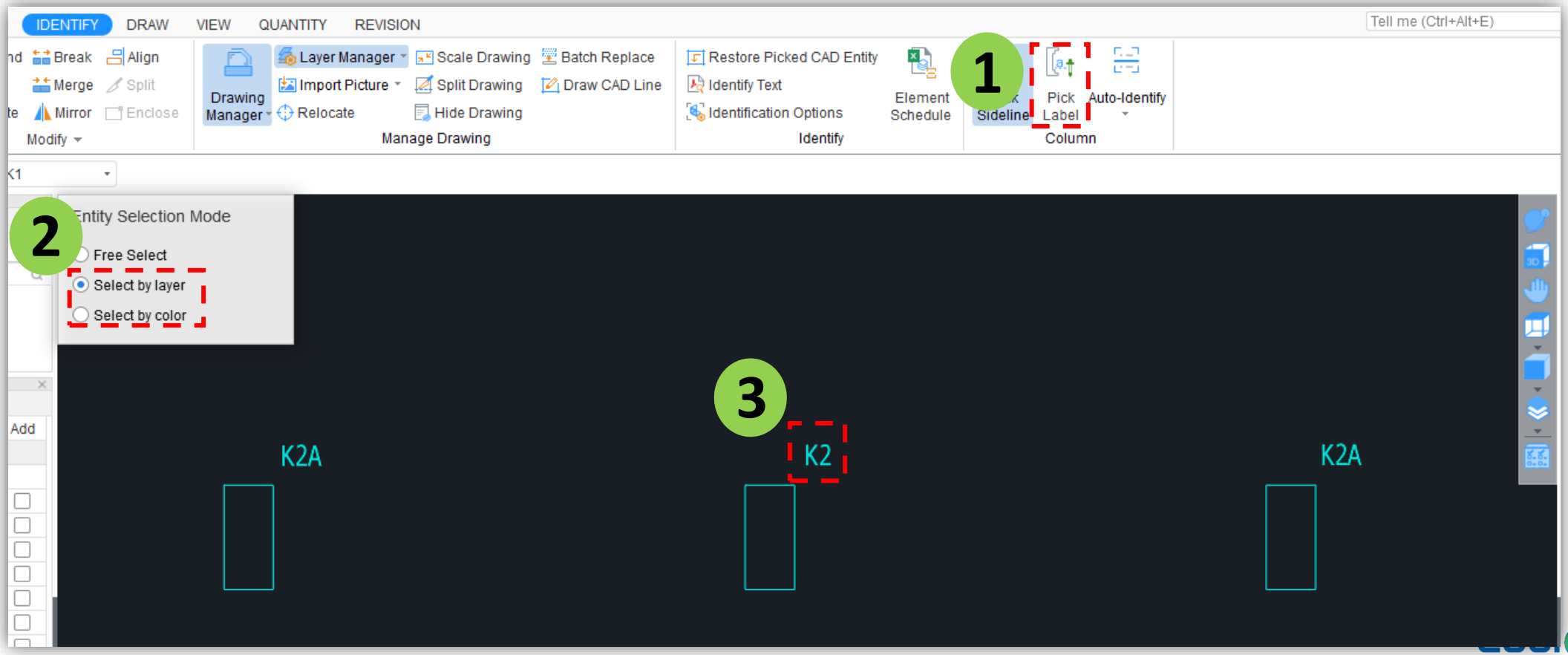
- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the frame/ side line of column & right click



Continue →

5.1(ii) Identify Column – Pick Label

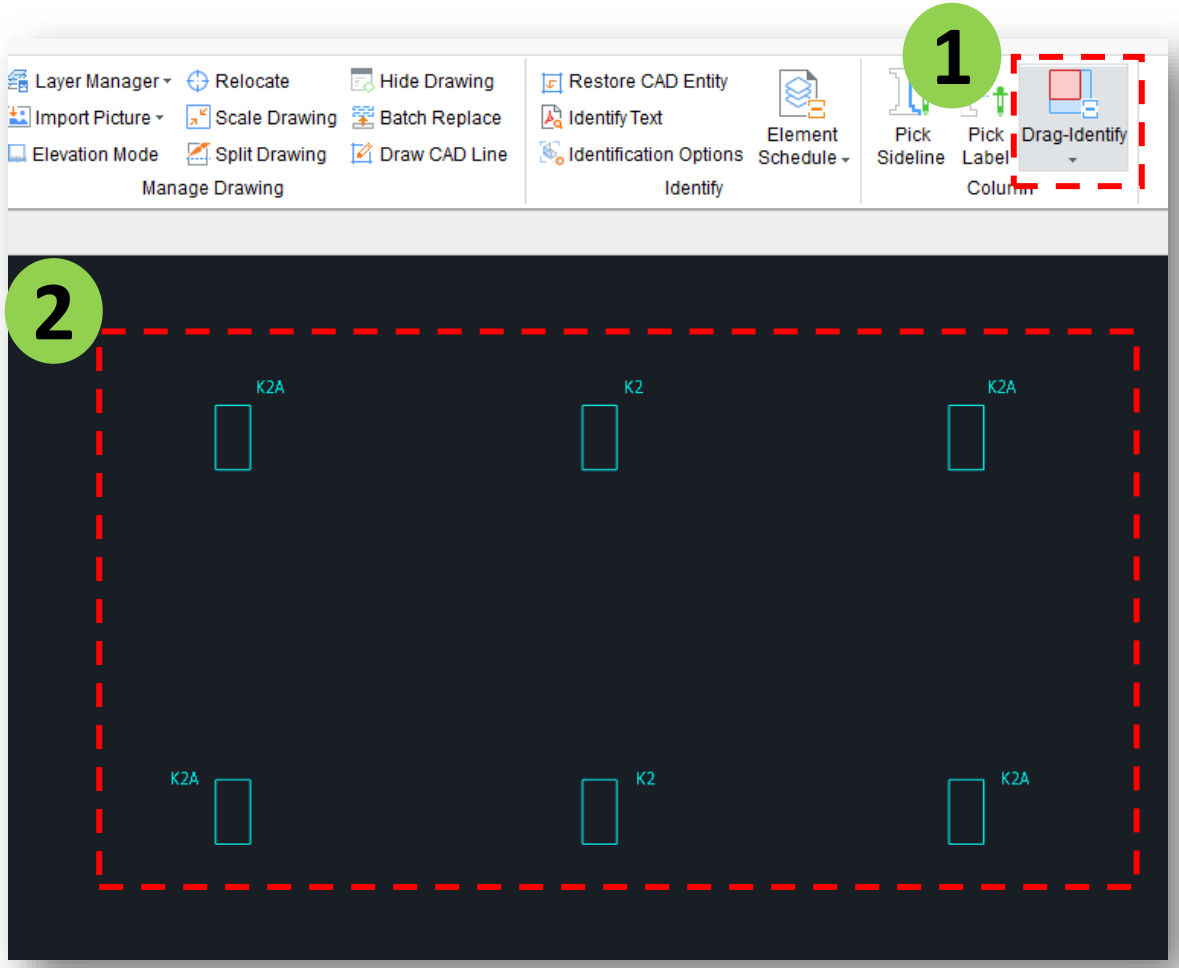
- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the name of column & right click

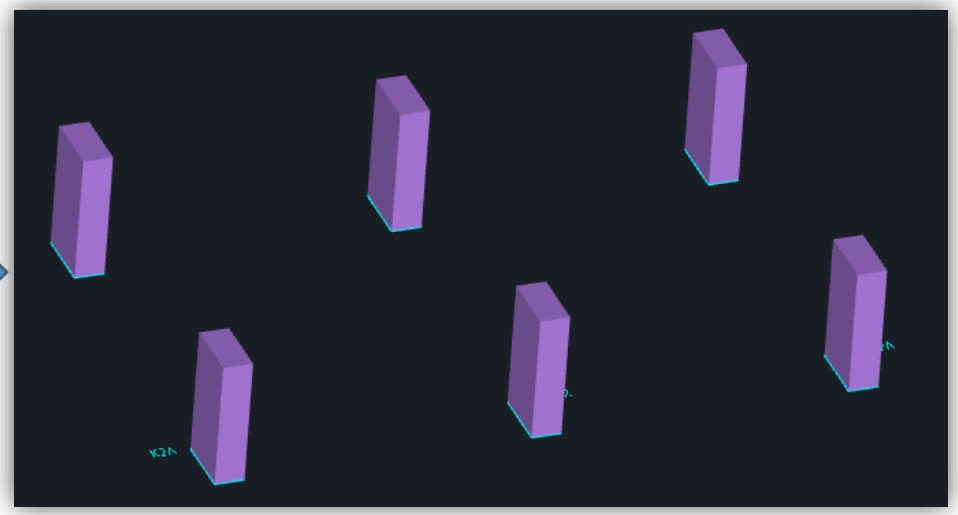


Continue →

5.1(ii) Identify Column - Identify

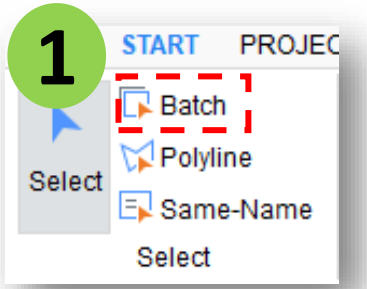
- Step 1: Tab {Identify}, Select [Auto-Identify]/ [Drag-Identify]
  - Whole area
  - Selected area
- Step 2: Highlight the certain area, right click

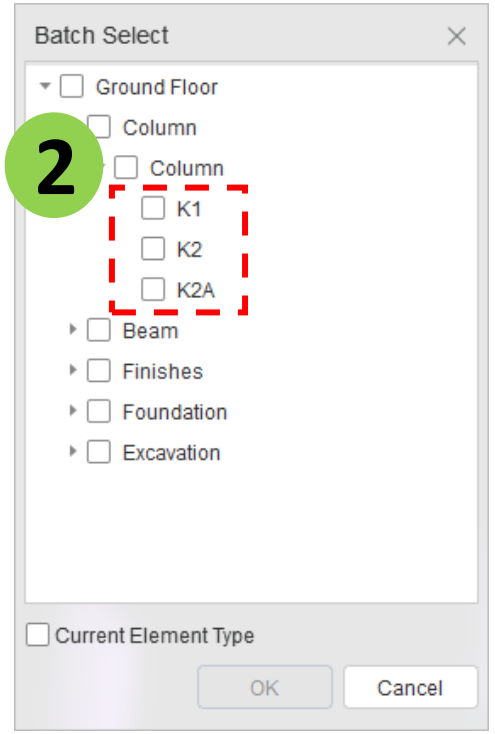


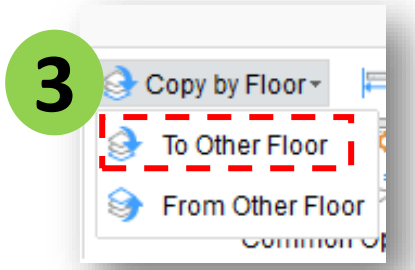


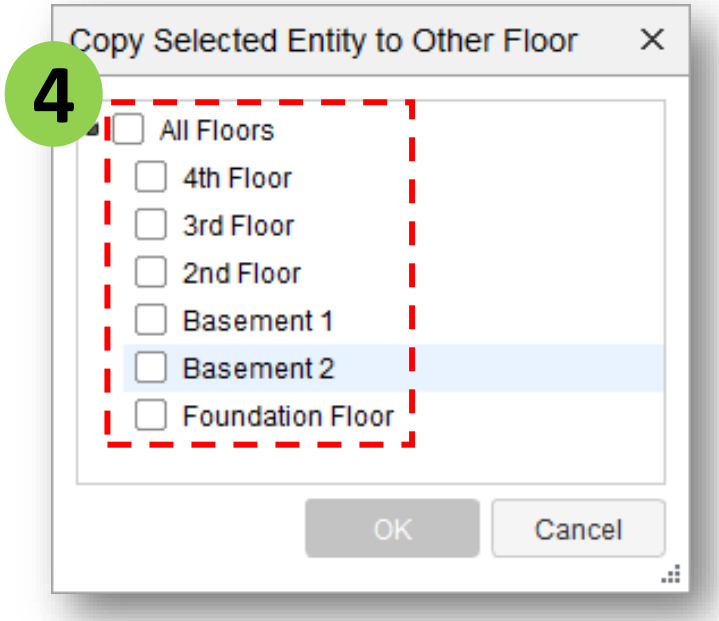
5.1 Copy Entity to other floor

- 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]

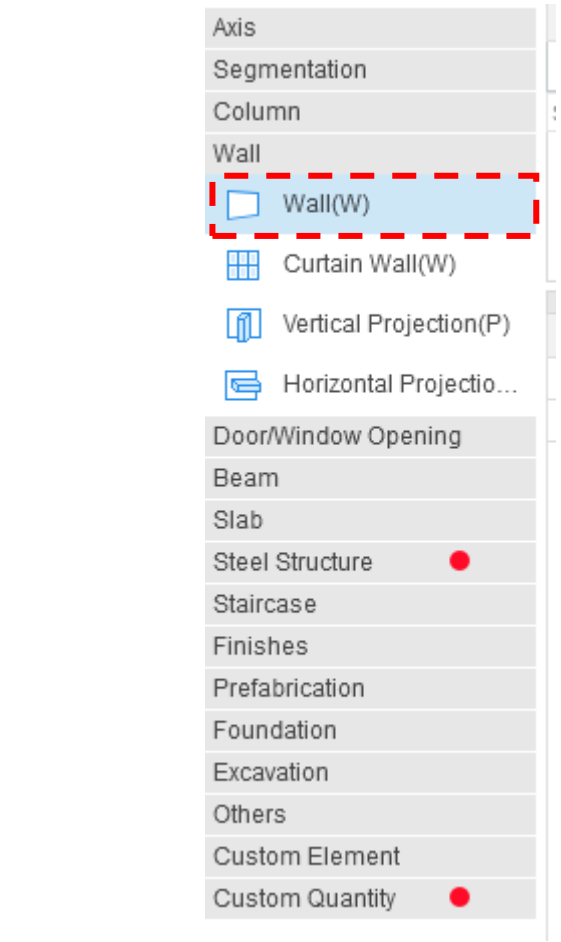






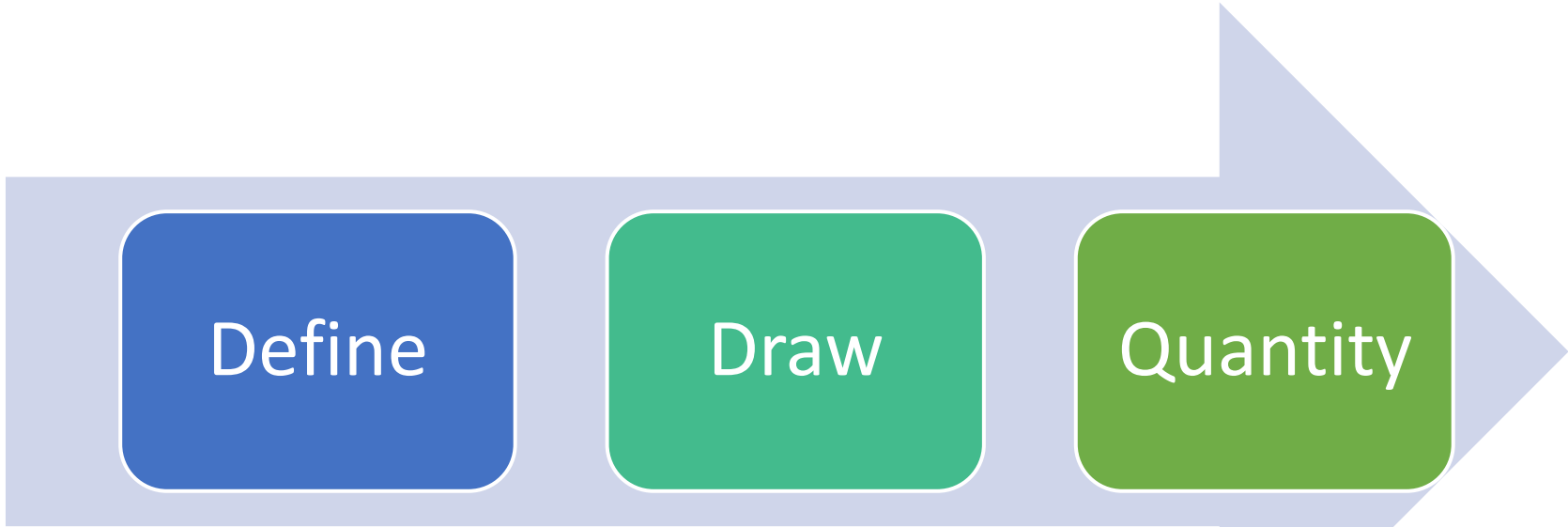


Linear Type



Wall

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)

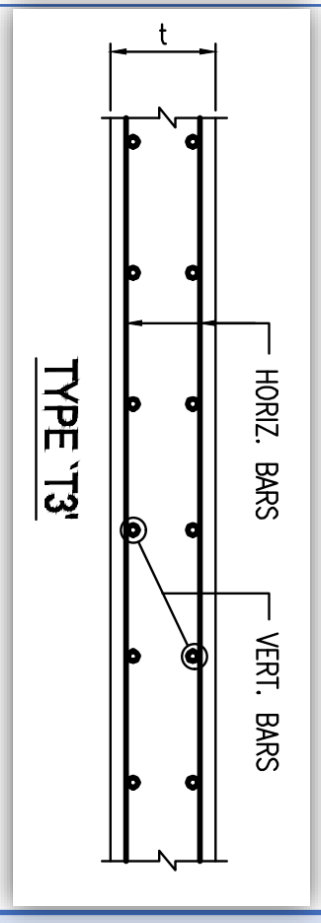
Brick Wall

Lightweight Panel Wall

Block Wall

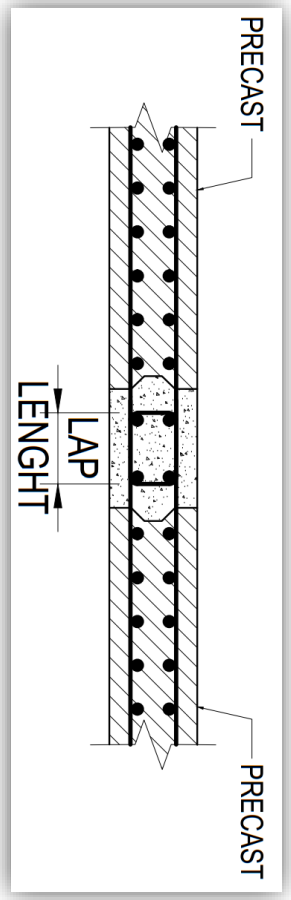
Glass Wall

5.2a Define Wall



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



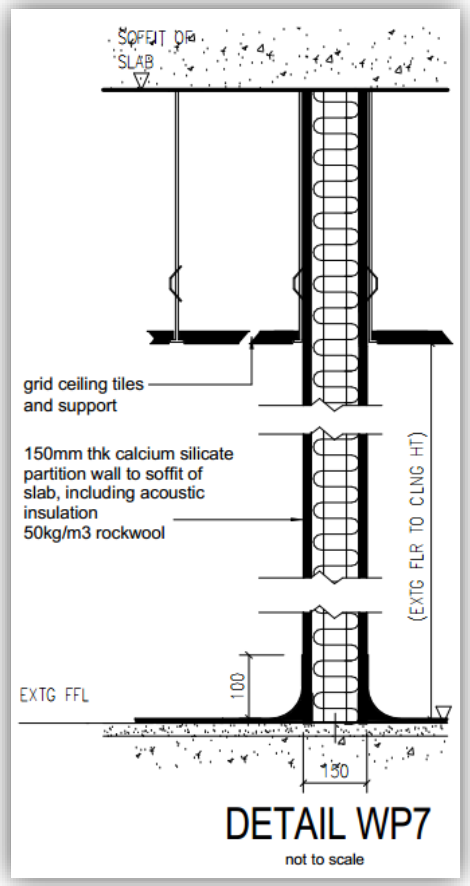
Attribute Editor

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.	

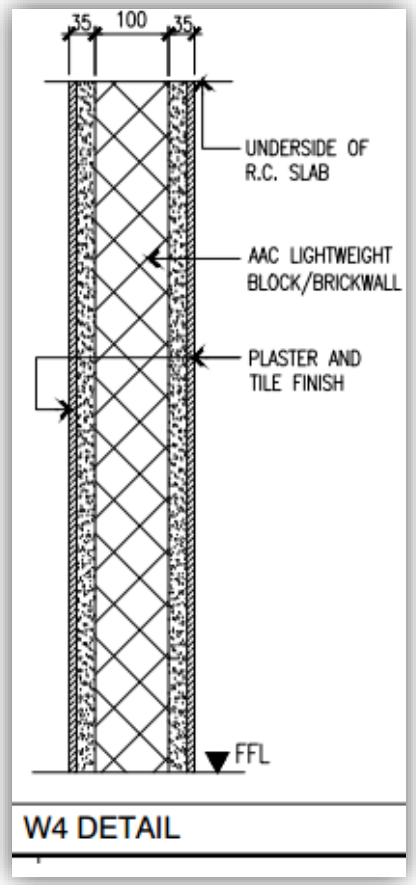
RC Wall

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.	



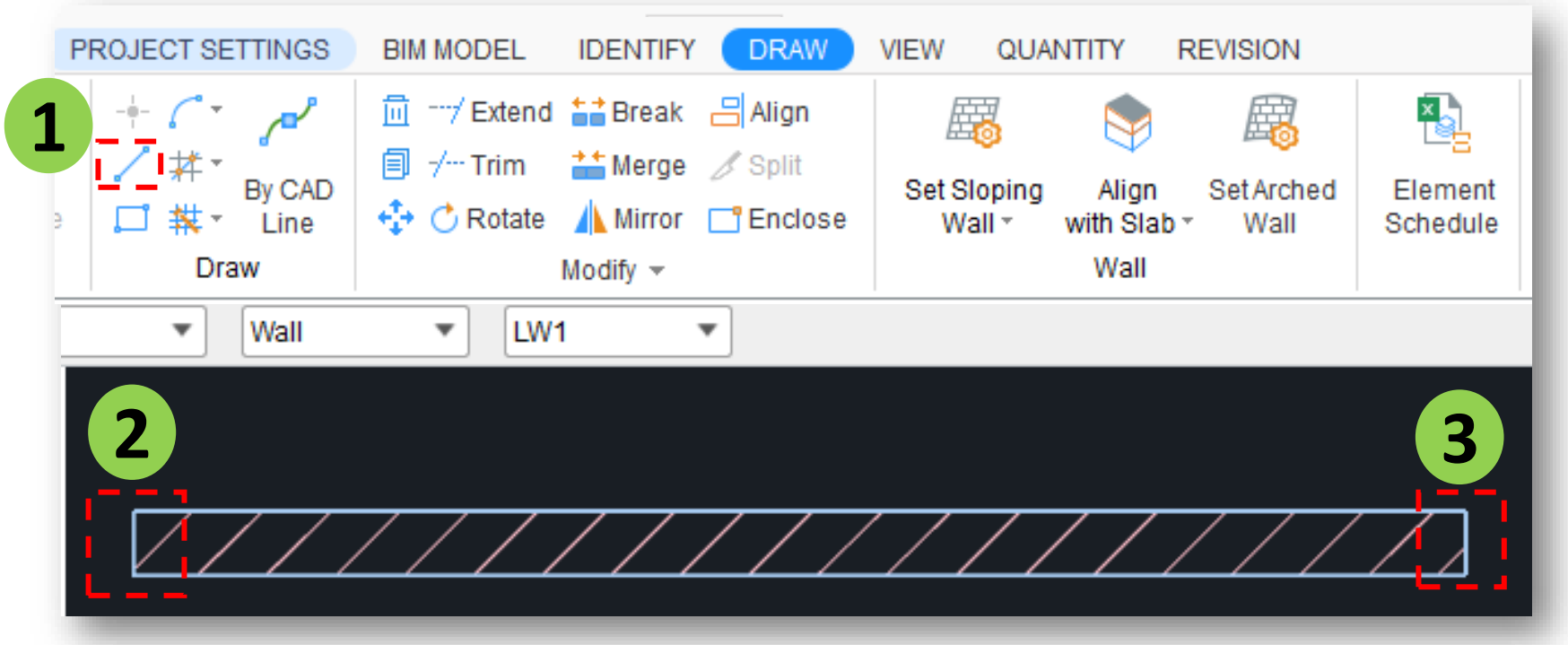
Attribute	Value
Common Attribute	
Name	W4
Category	Brick Wall
Material	Brick
Thicknes...	100
Start Top ...	Floor_Top_Elevation
End Top ..	Floor_Top_Elevation
Start Bott...	Floor_Bottom_Elevat...
End Botto	Floor_Bottom_Elevat...
Axis to Le...	(50)
Interior/E...	Interior Wall
Entity Type	(Vertical)
Entity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

Partition Wall

Brick Wall

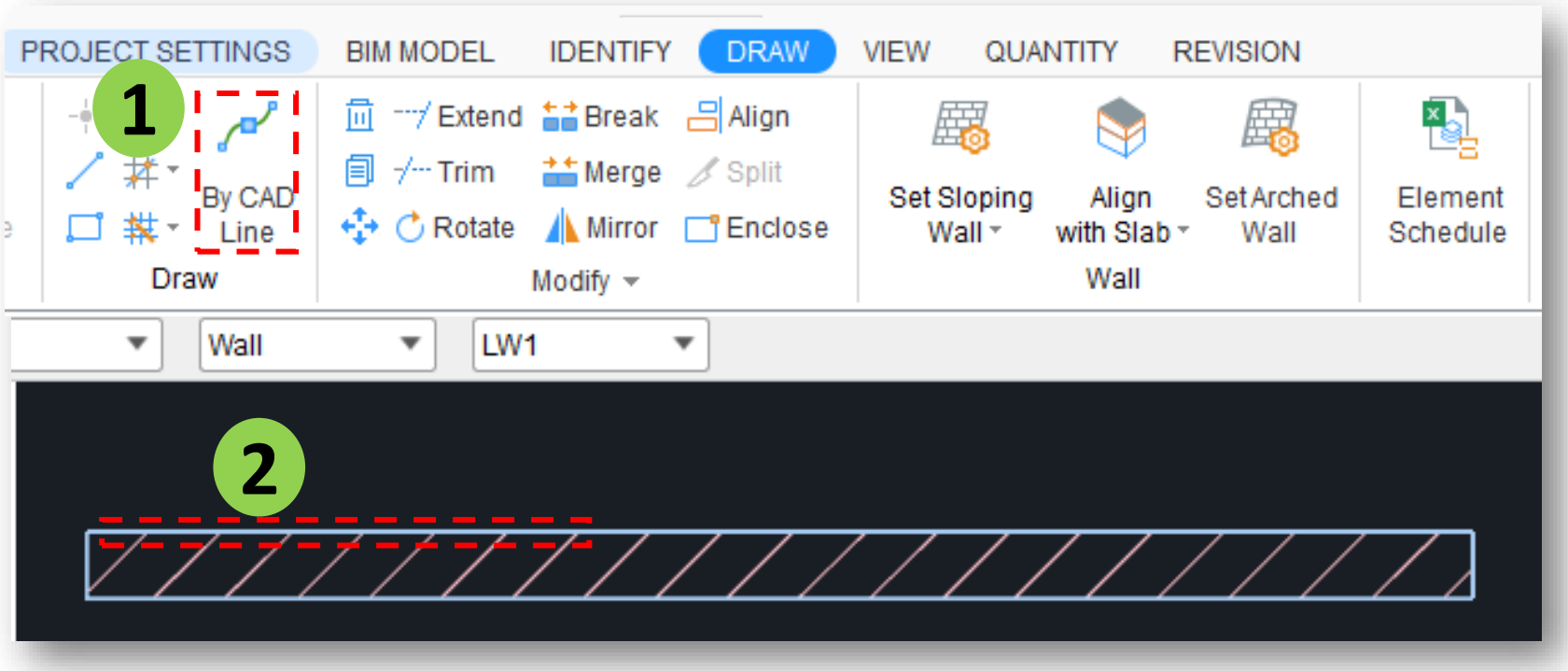
5.2b Draw Wall

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



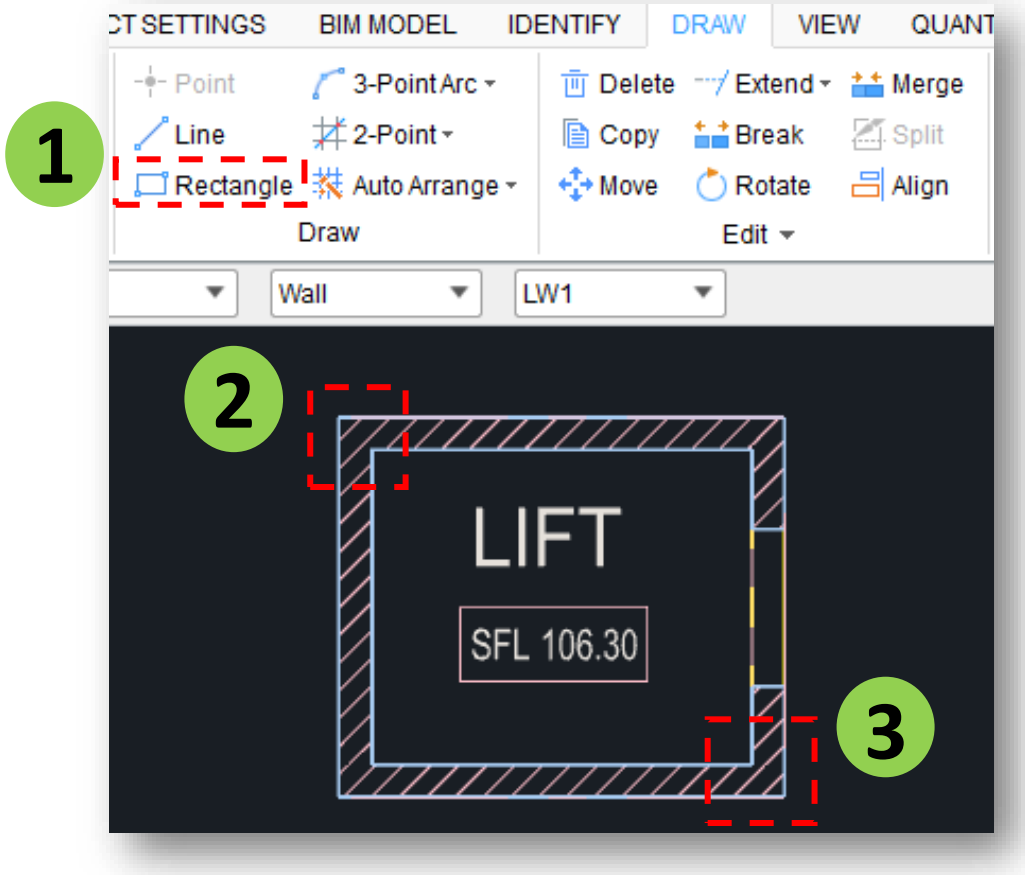
5.2b Draw Wall

- 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



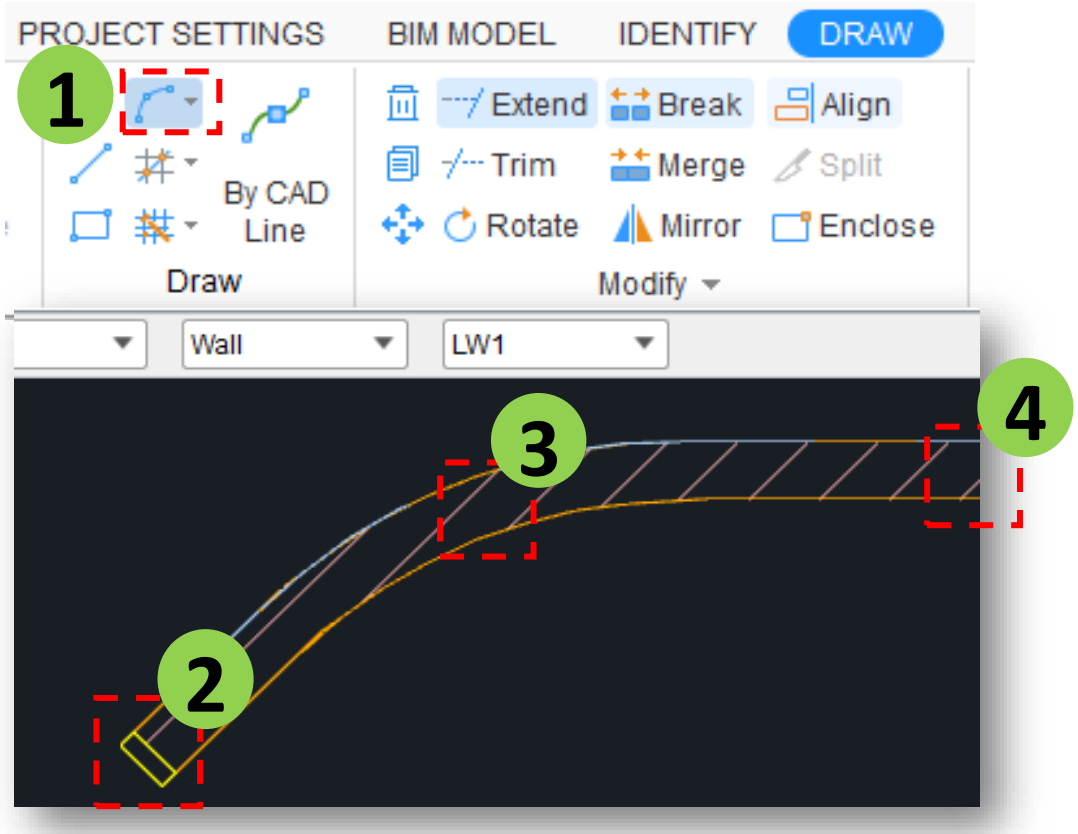
5.2b Draw Wall (cont'd)

- 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)

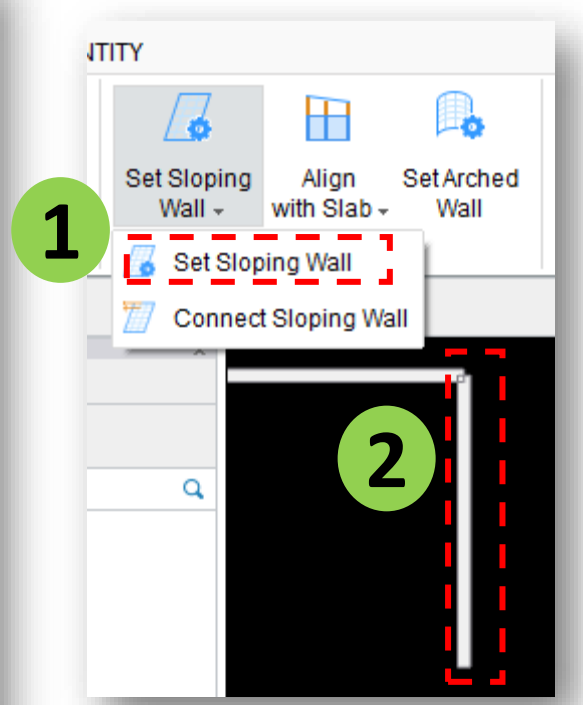
- Step 1: Tab {Draw}, Click [3-point Arc] to draw curve wall
- Step 2: Begin from Start Point
- Step 3: Continue at Mid Point
- Step 4: Stop at End Point

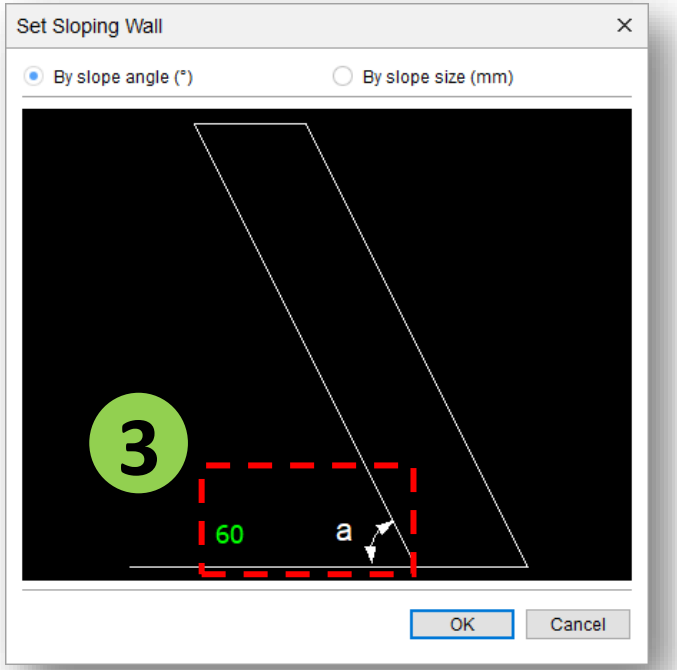


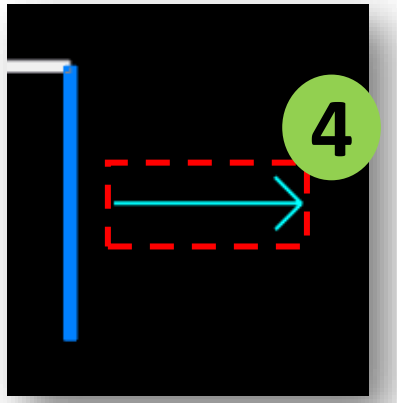
5.2b Draw Wall (cont'd)

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



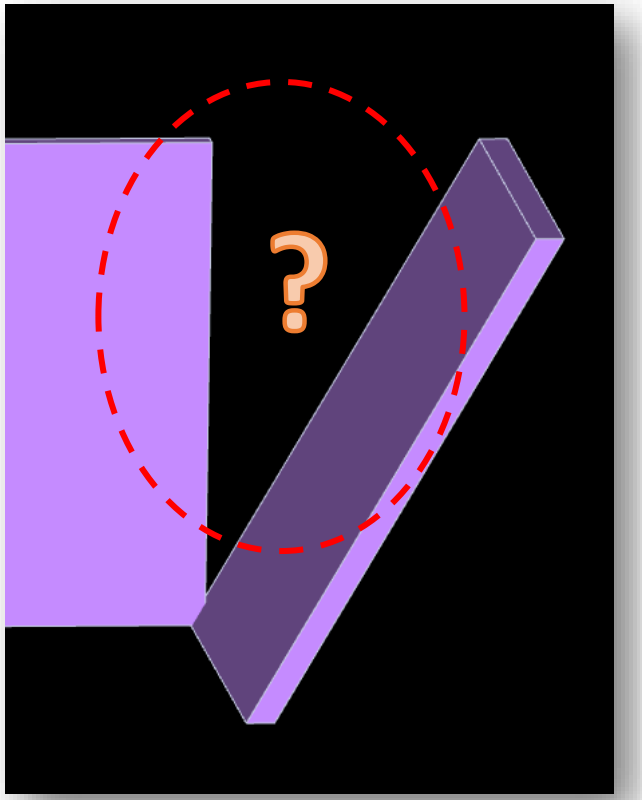


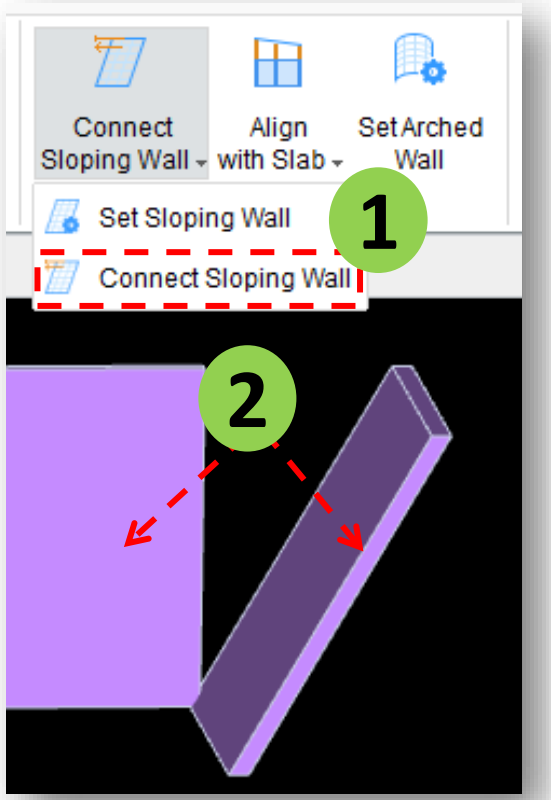


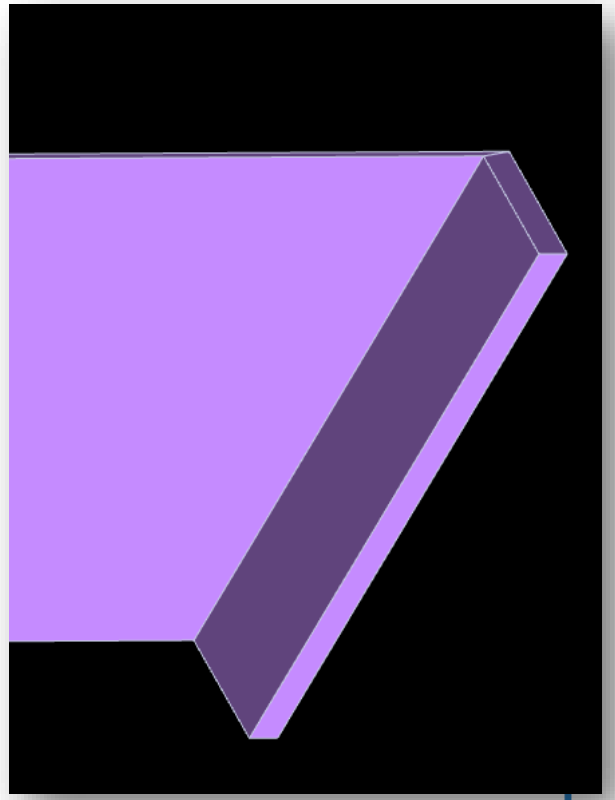
5.2b Draw Wall (cont'd)

To connect sloping wall

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

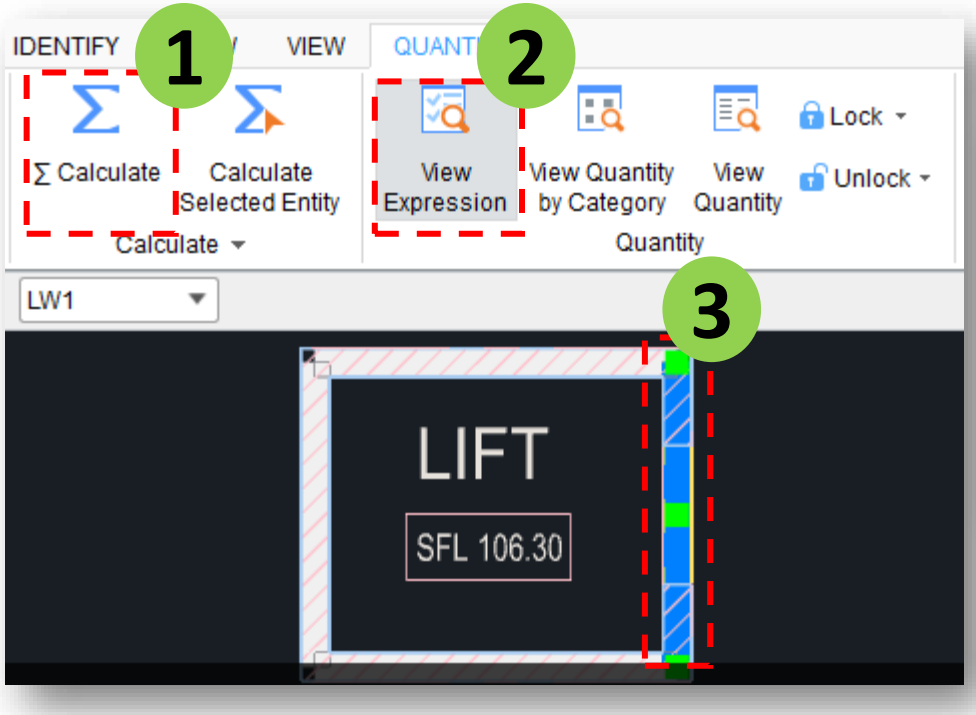






5.2c Quantity of Wall

- 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



4

Element Type: | Element Name: Wall-1 | Quantity Name: [All] | 3D Deduction

	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)

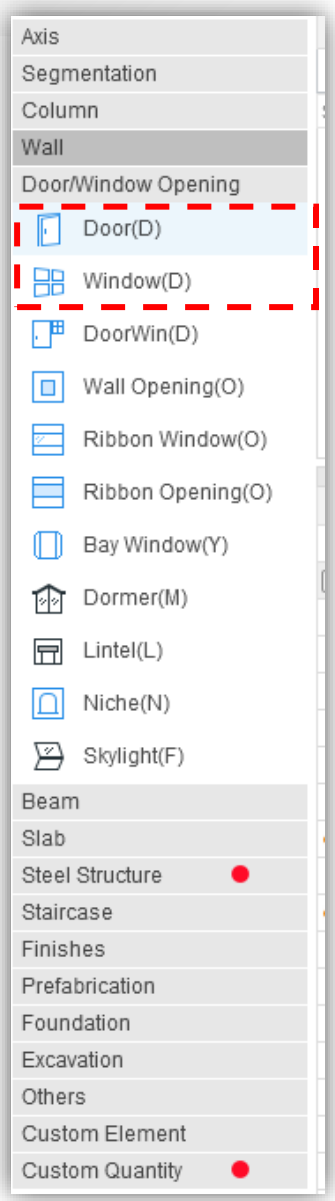
Notes:

Which quantity to extract for ARCHITECTURAL WALL

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

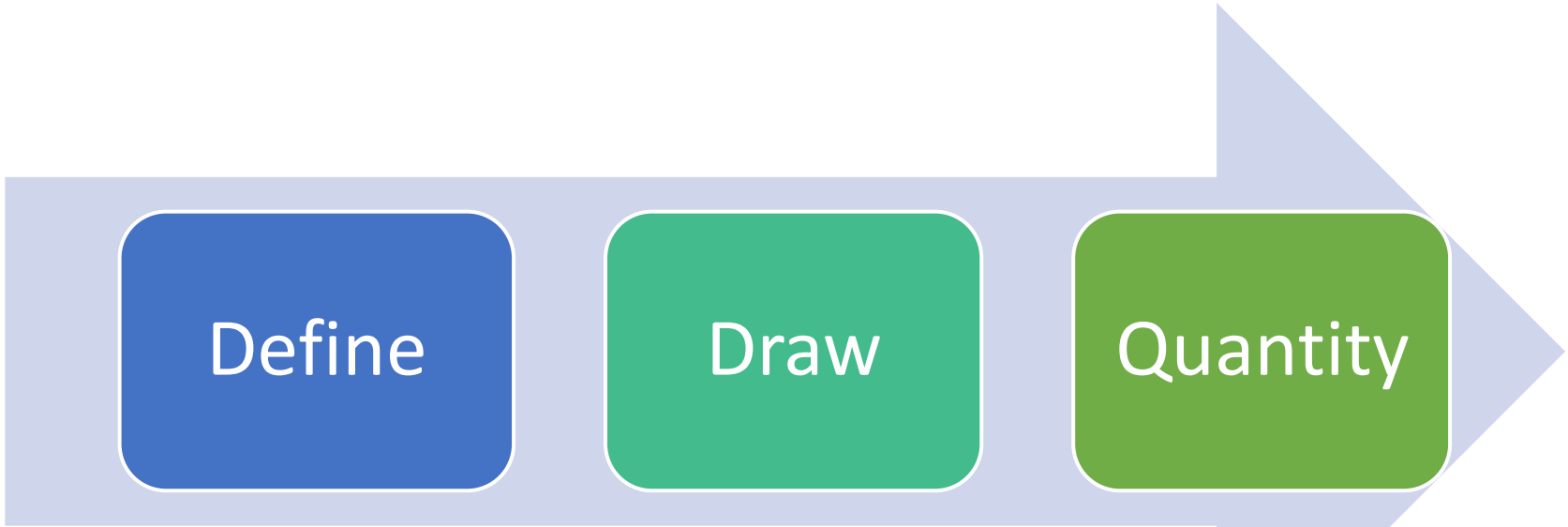
	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	(15.126<Length>*3.000<Height of Wall>*0.230<Thickness of Wall>)-0.414<Deduct column>-2.673<Deduct beam>	7.350	m3
2	Area	A	(15.126<Length>*3.000<Height of Wall>)-1.800<Deduct column>-11.620<Deduct beam>	31.956	m2
3	Number	N		1	pc
4	Net Length of Wall	NLW	15.126<Original Net Length>-0.600<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

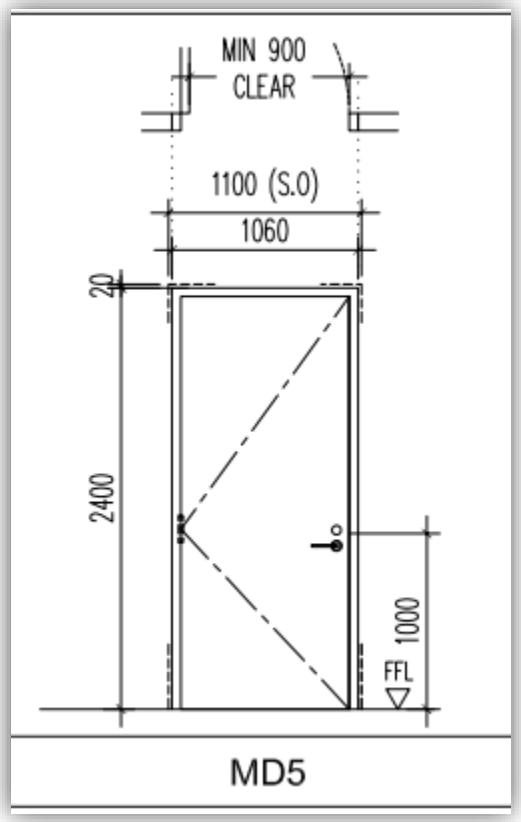
Timber door

Fire Door

Glass Door

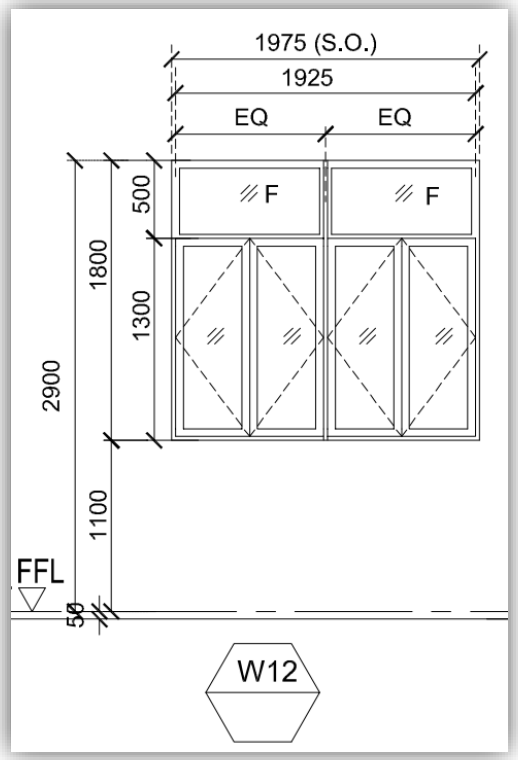
Aluminum Door

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 betwee...	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	



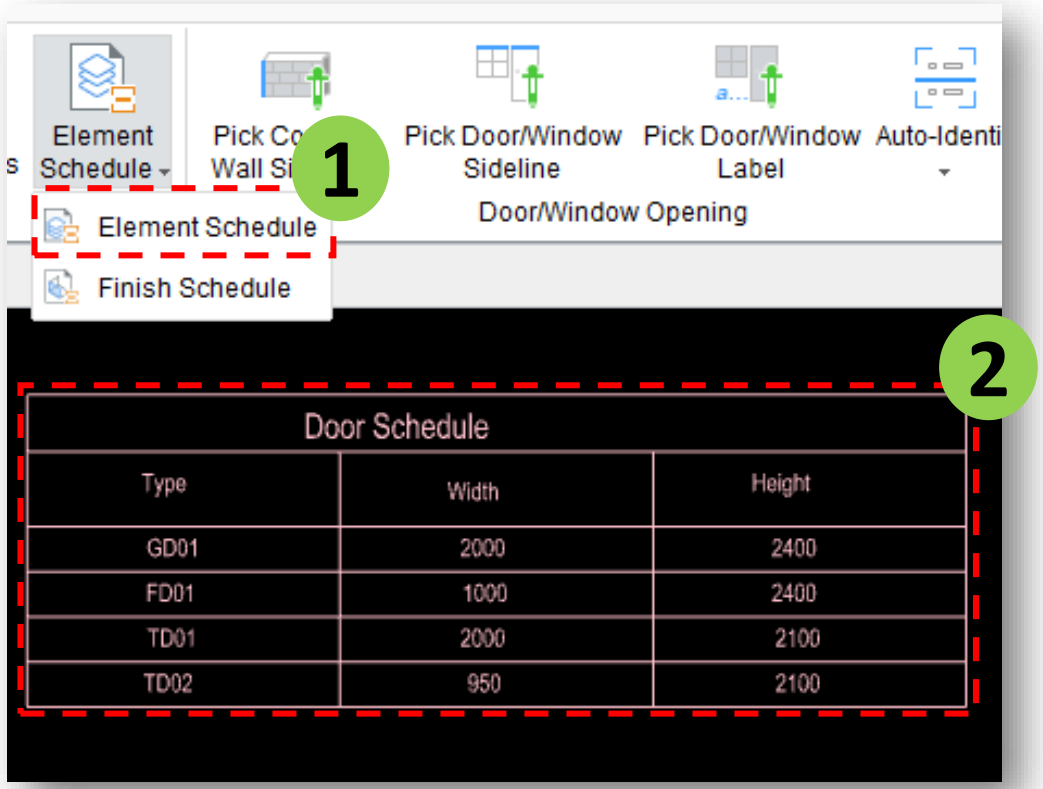
Attribute	Value
Common Attribute	
Name	W12
Width of Opening (mm)	1975
Height of Opening (mm)	1800
Height above Floor (mm)	1100
Category	Common Window
Material	Metal
Opening Method	
Frame Thickness (mm)	60
Frame Centerline to Wa...	0
Horizontal Gap betwee...	0
Vertical Gap between O...	0
Depth of Opening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

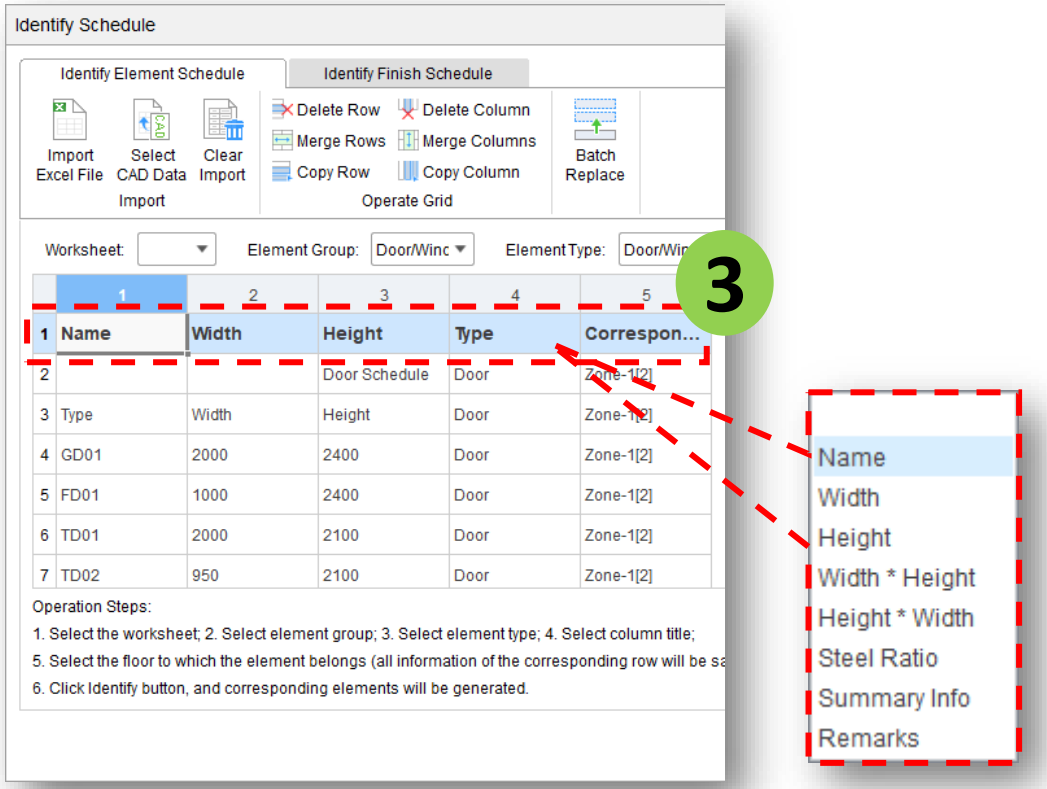
Door	Window

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

5.3a Identify Door/ Window from PDF

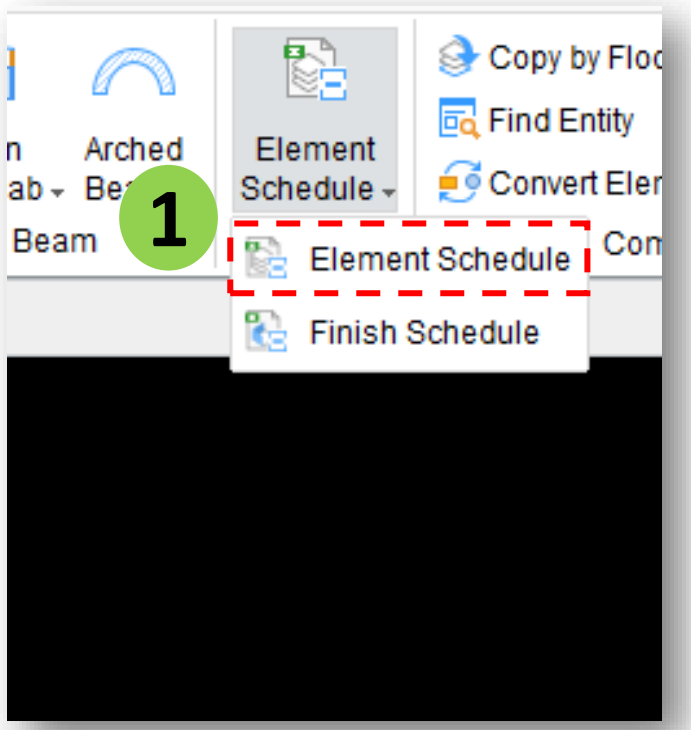
- Step 1: Tab {Identify}, Select [Element Schedule]
- Step 2: Highlight Schedule & right click
- Step 3: Nominate the corresponding column & Identify

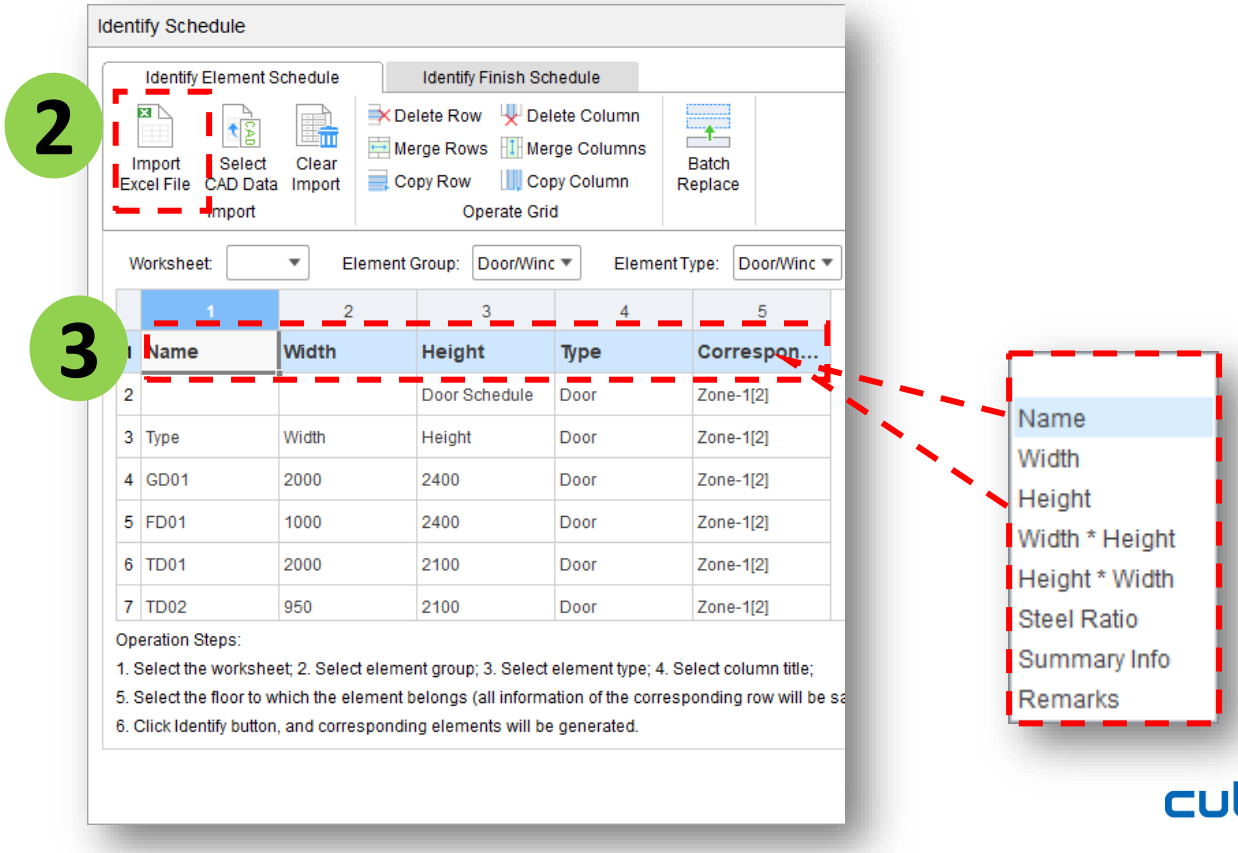




5.3a Identify Door/ Window from Excel

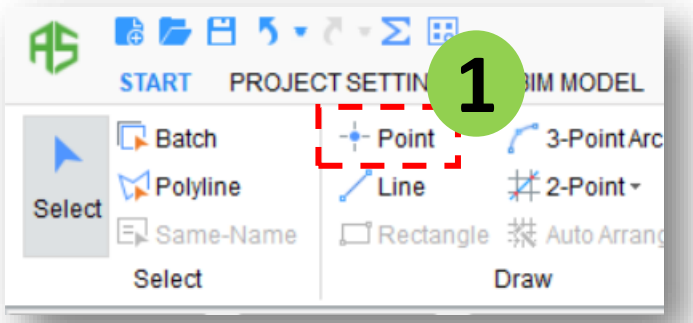
- Step 1: Tab {Draw}, Select [Element Schedule]
- Step 2: Import Excel File
- Step 3: Nominate the corresponding column & Identify

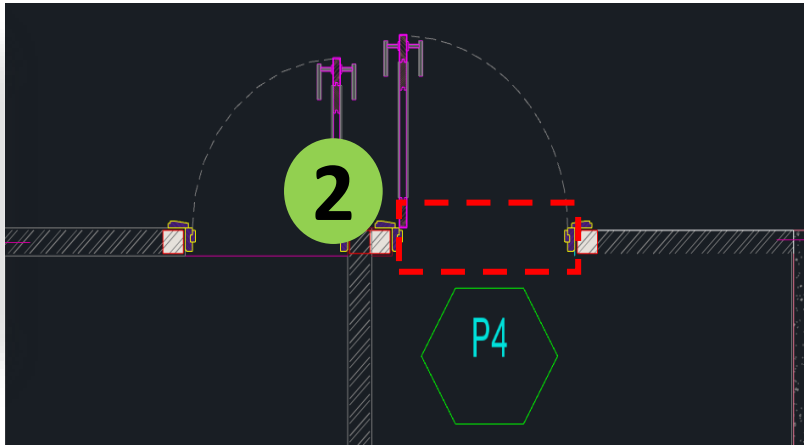


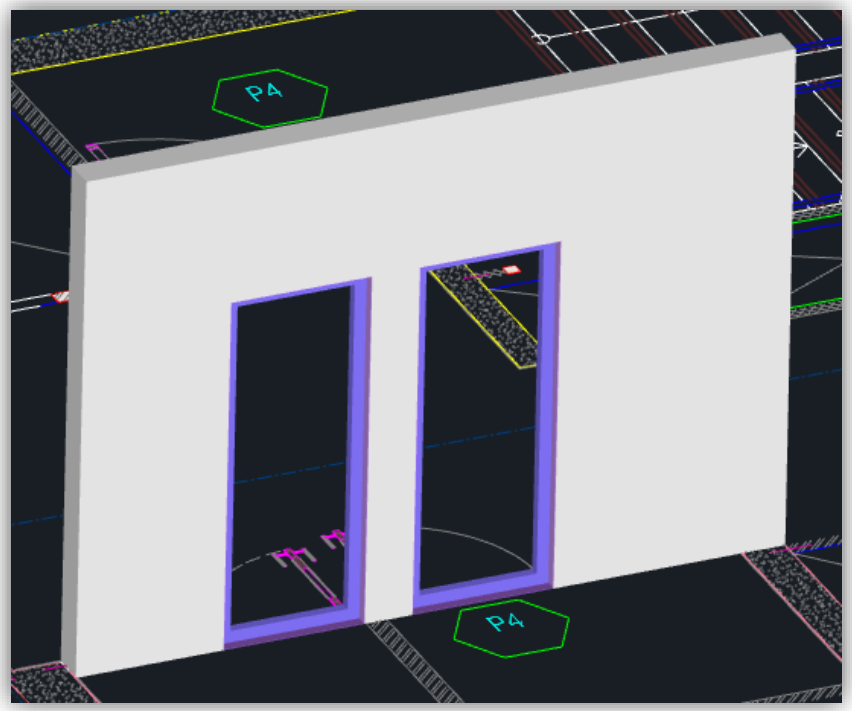


5.3b Draw Door/ Window

- 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

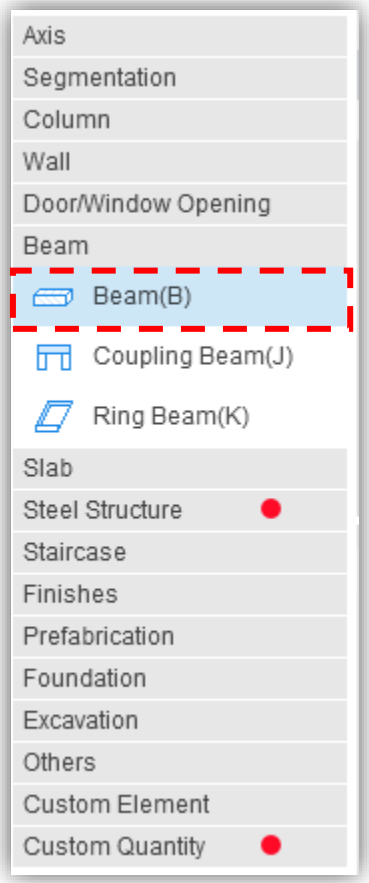
Notes:

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 an d break of opening

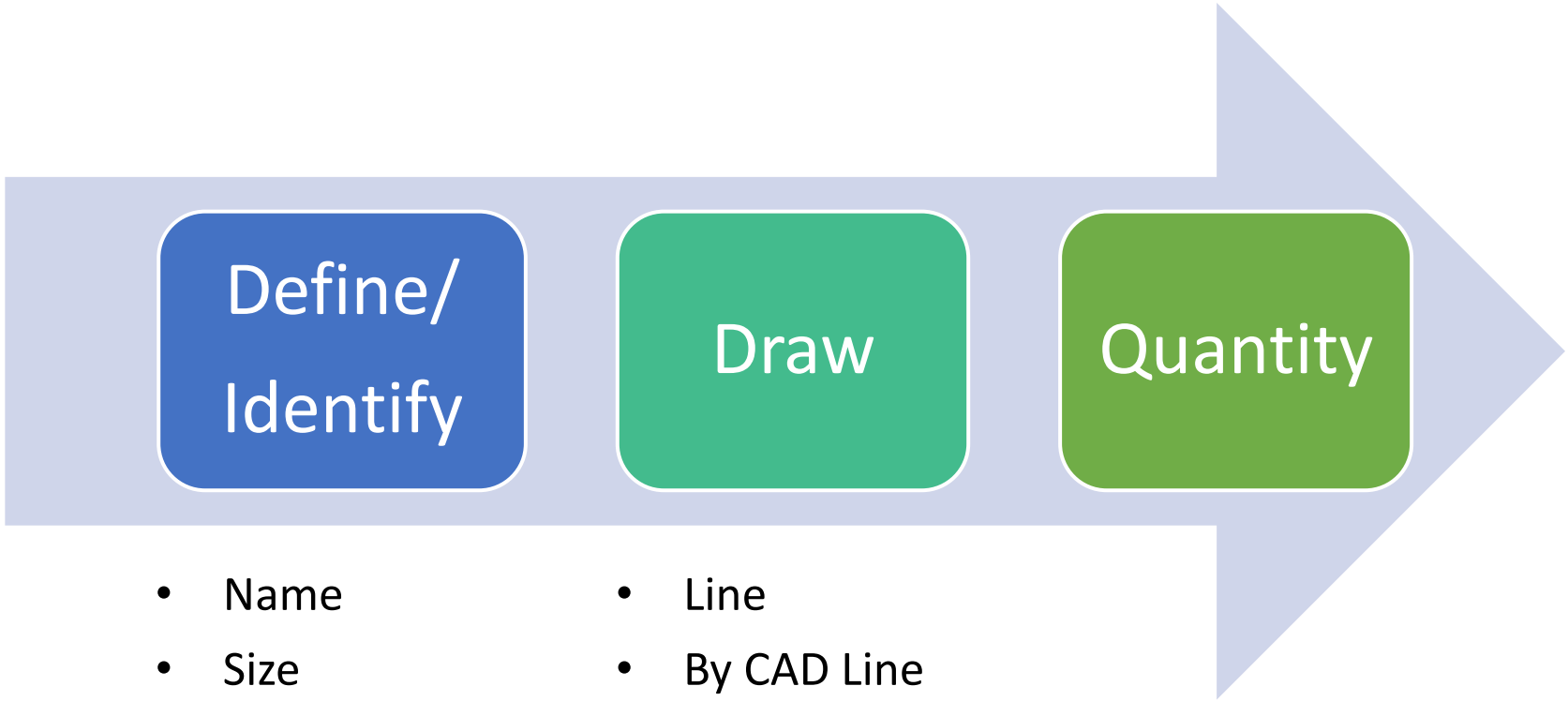
	Quantity Name	Quantity Expression	Quantity	Unit
1	Area of opening	0.825<Width>*2.100<Height>	1.733	m2
2	Number		1	pc
3	Area of frame	0.825<Width>*2.100<Height>	1.733	m2
4	Width of opening		0.825	m
5	Height of opening		2.100	m
6	Girth of opening		5.850	m
7	Length of edge and break of opening	0.825<Width>+2.100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

Linear Type



Beam

5.4 Beam

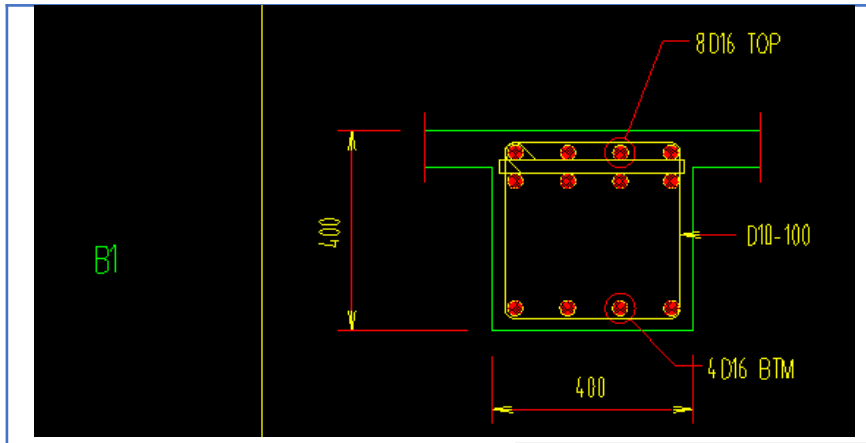


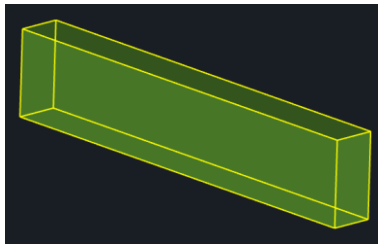
- Name
- Size
- Material
- Identify from PDF/ Excel

- Line
- By CAD Line
- Crank Beam

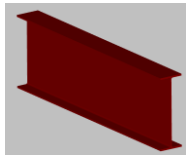
* F4 to change alignment

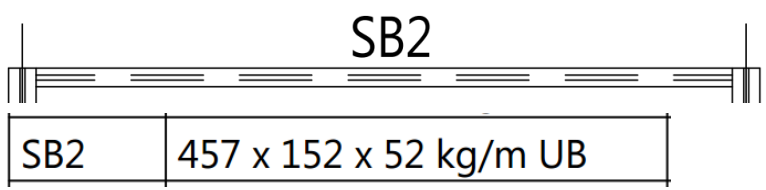
5.4a Define Beam





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	☐



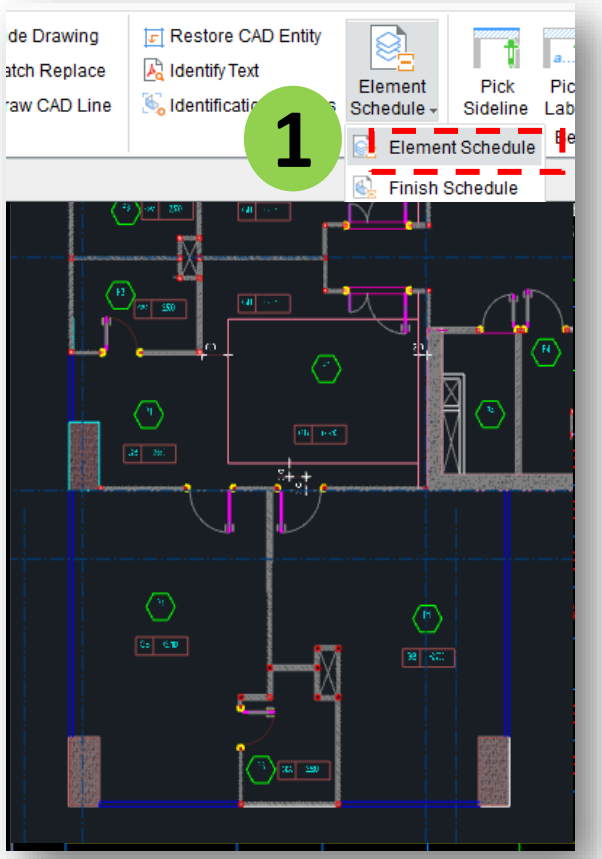


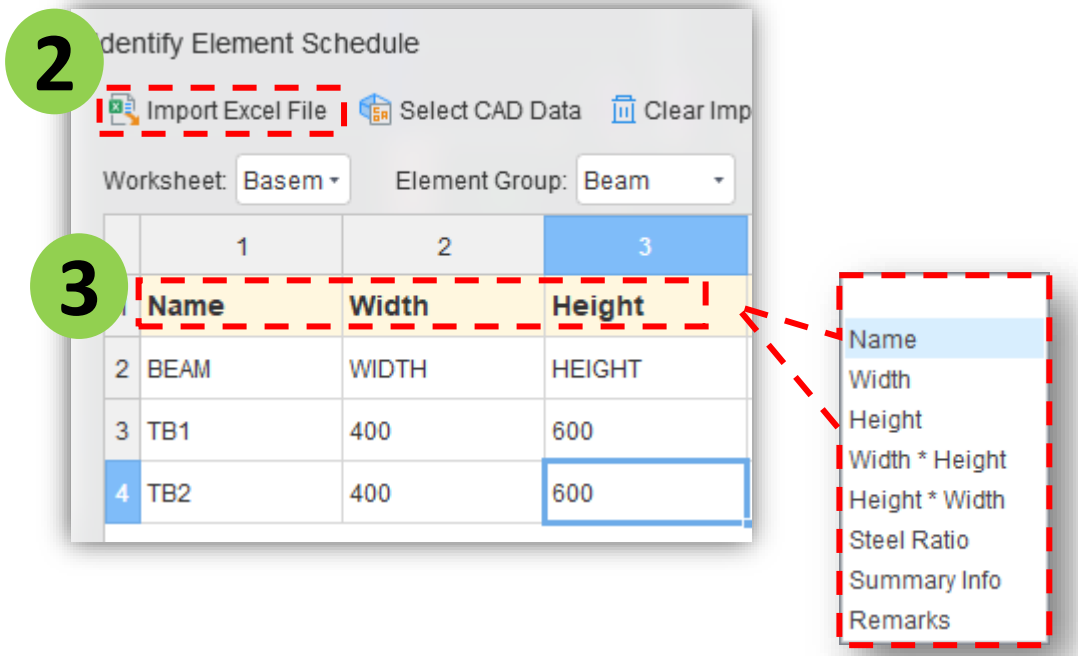
RC Beam

Steel Beam

5.4a Identify Beam Schedule from Excel

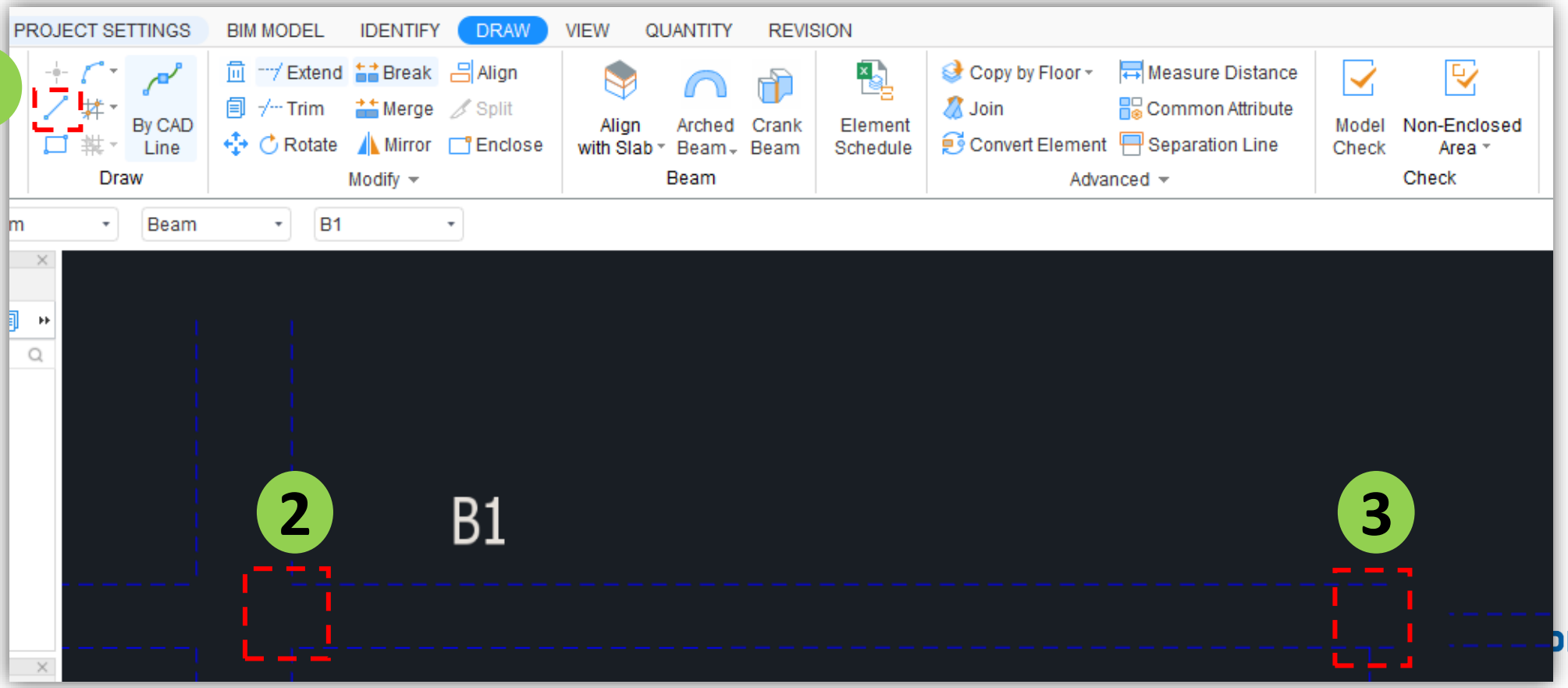
- Step 1: Tab {Identify}, Select [Element Schedule]
- Step 2: Import Excel File
- Step 3: Nominate the corresponding column & Identify





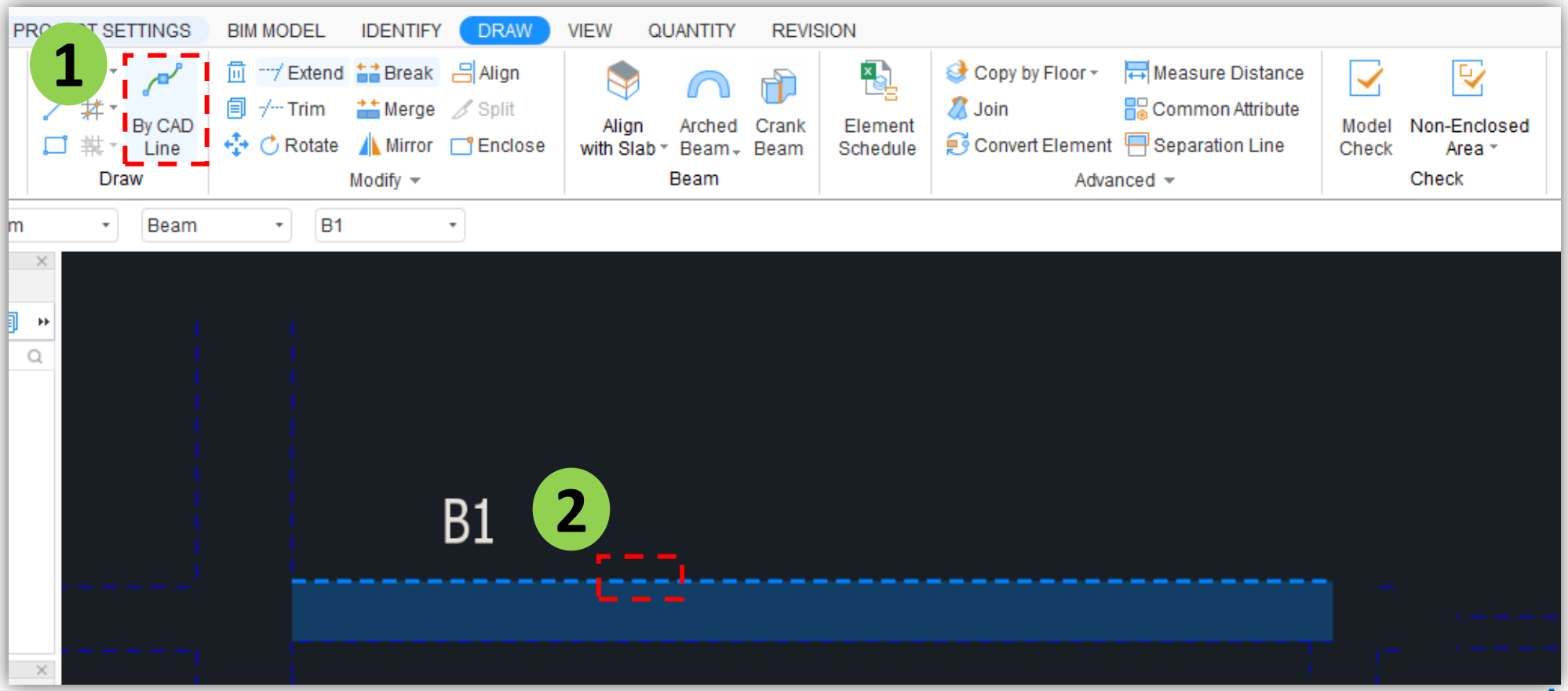
5.4b Draw Beam - Line

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



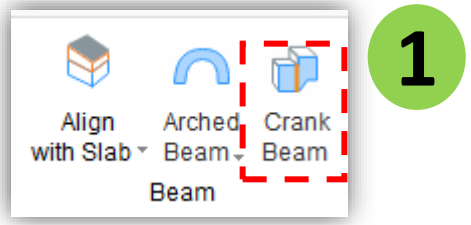
5.4b Draw Beam - By CAD Line

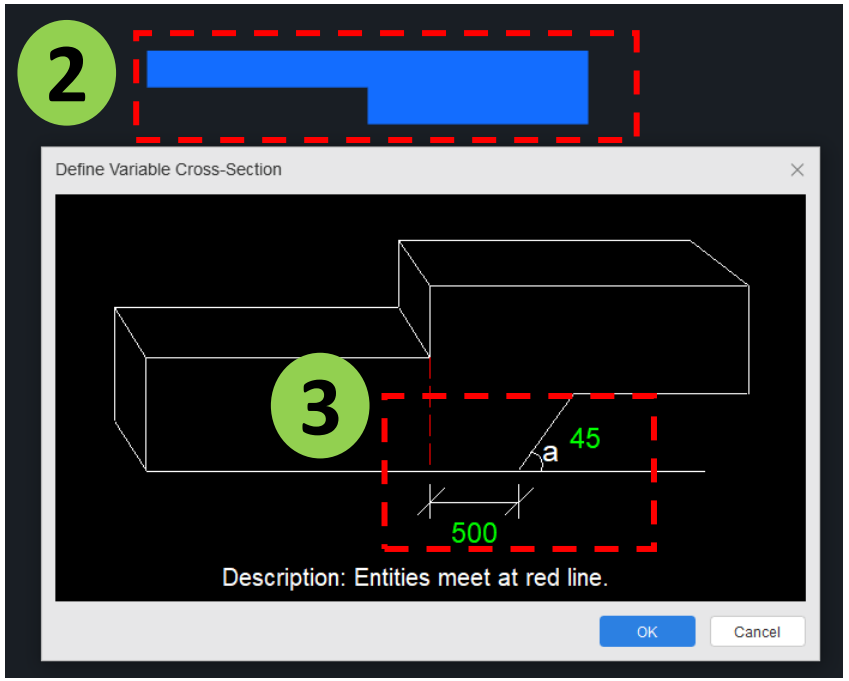
- Step 1: Tab {Draw}, Click [By CAD Line] to draw a straight line
- Step 2: Select CAD line, press F4 to adjust location, right click to generate entities

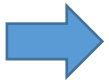


5.4b Draw Beam – Crank Beam

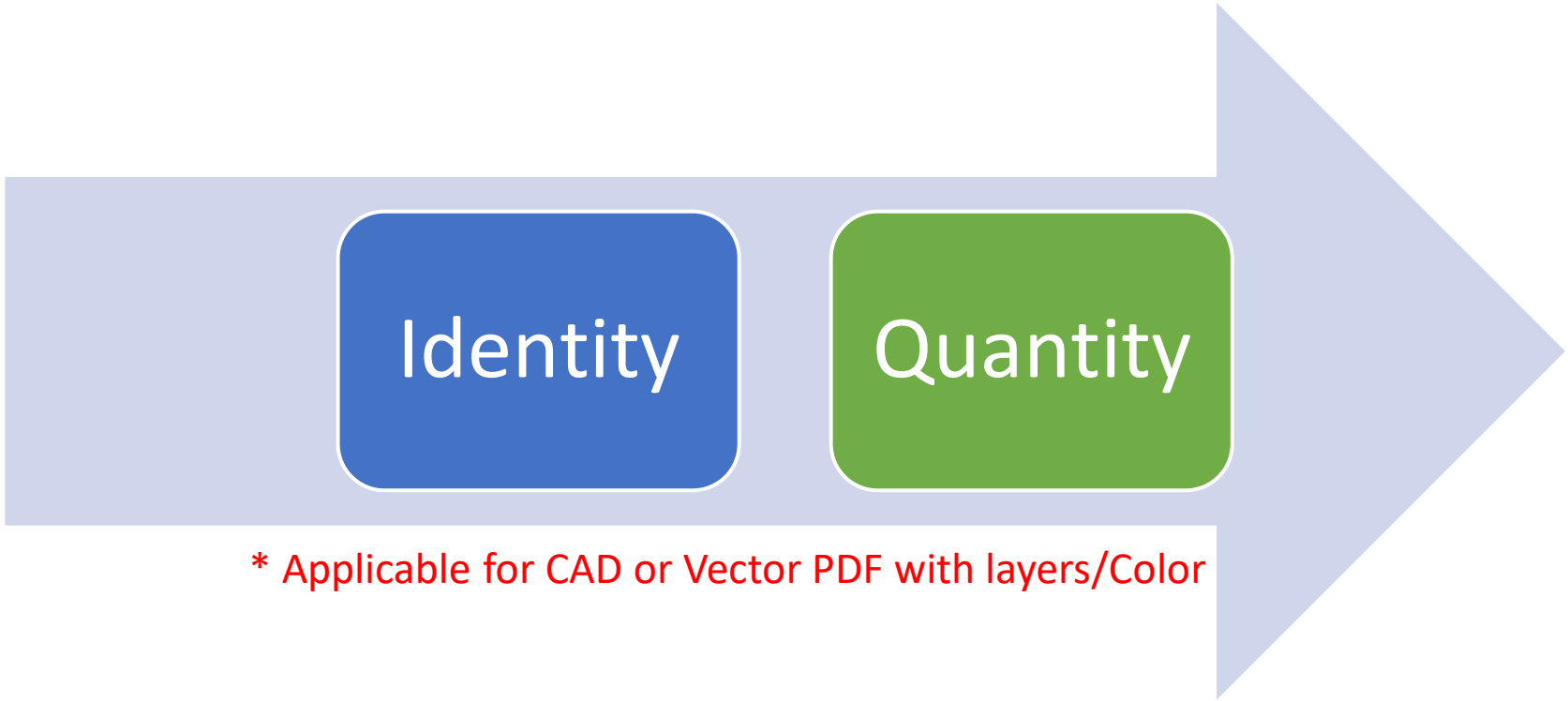
- Step 1: Tab {Draw}, Click [Crank Beam] to define
- Step 2: Select 2 beams, right click
- Step3: Input Cross-Section information & ok





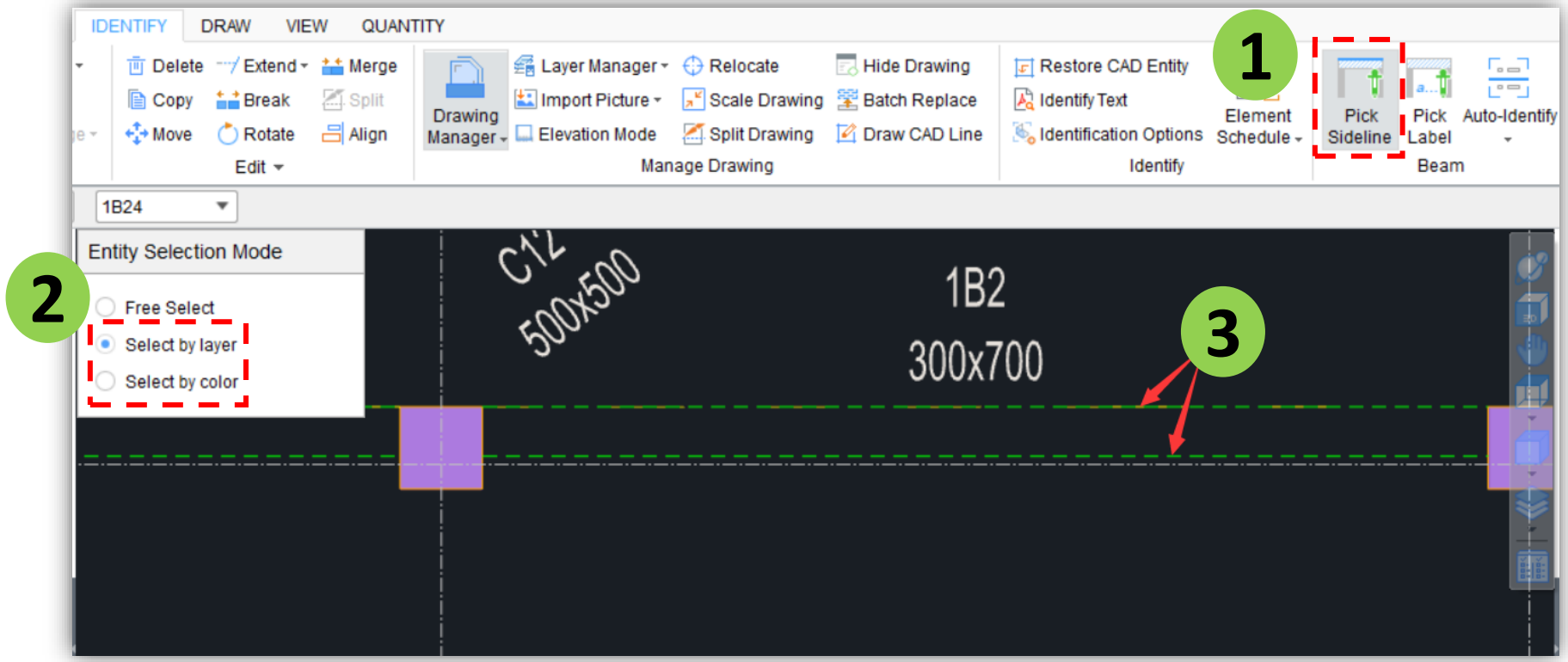


5.4(ii) Beam (Option 2)



5.4(ii) Identify Beam – Pick Sideline

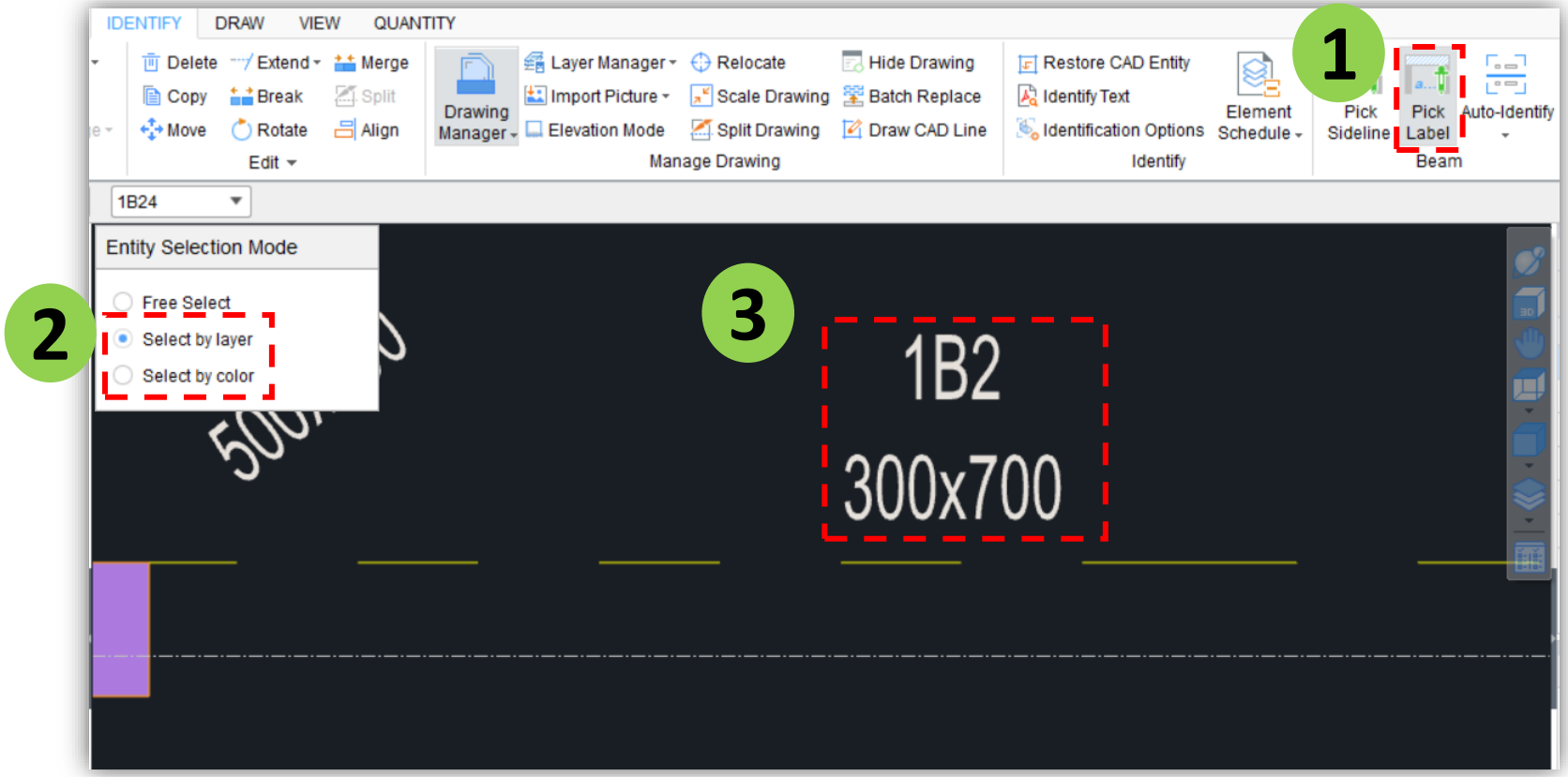
- Step 1: Tab {Identify}, Select [Pick Sideline]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the frame/ side line of beam & right click



Continue →

5.4(ii) Identify Beam – Pick Label

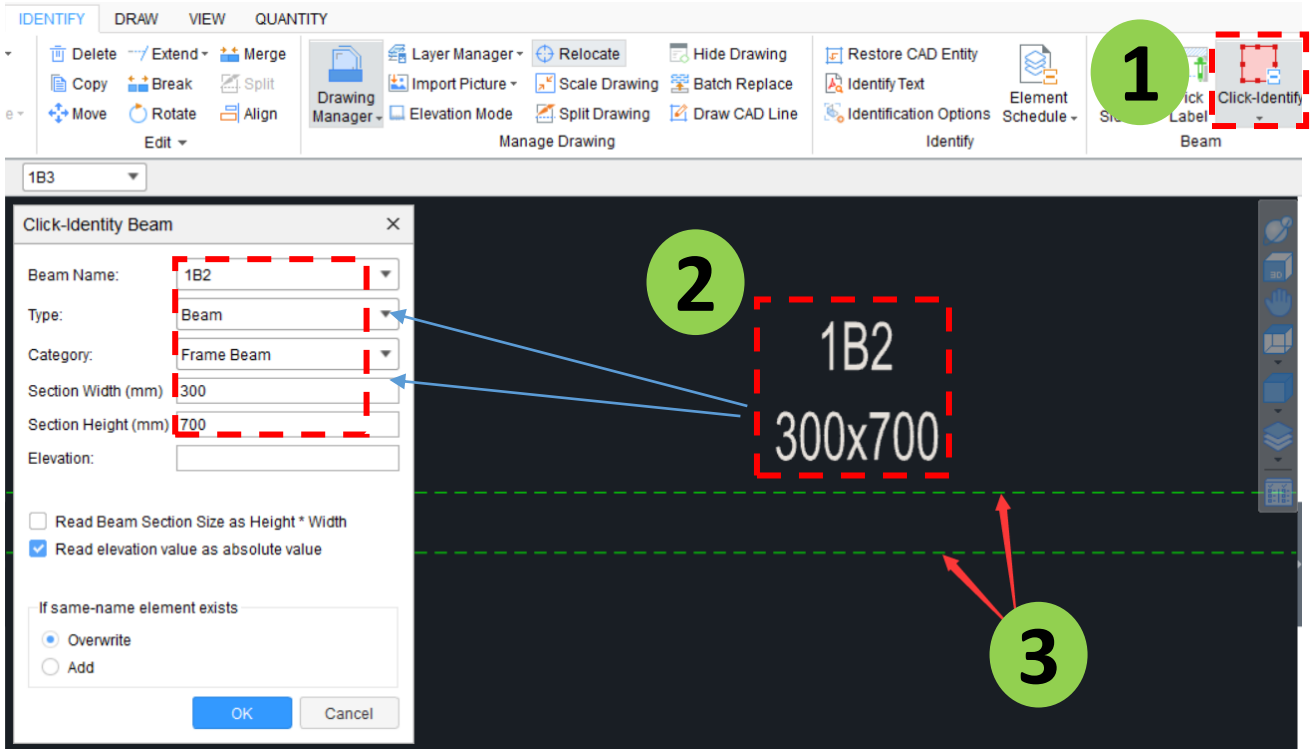
- Step 1: Tab {Identify}, Select [Pick Label]
- Step 2: Choose [Select by layer]/ [Select by colour]
- Step 3: Pick the name of beam & right click

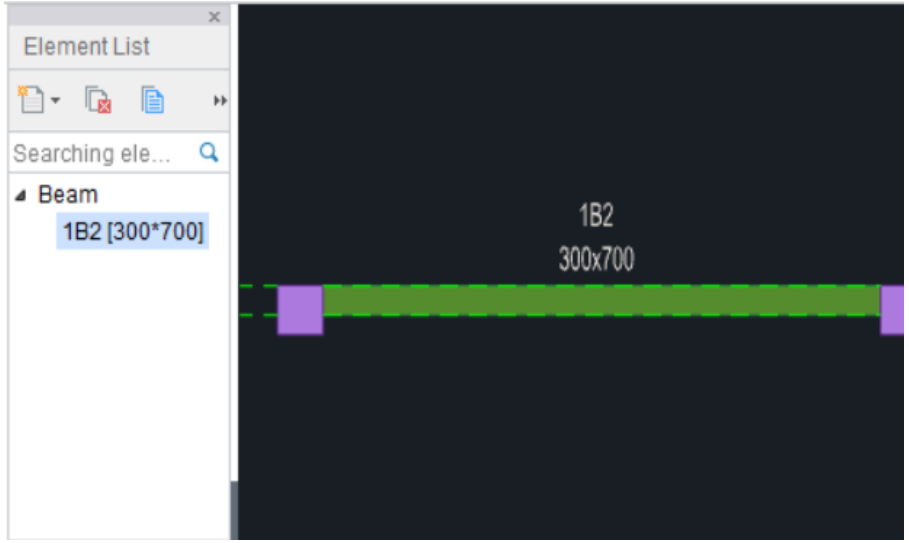


Continue →

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

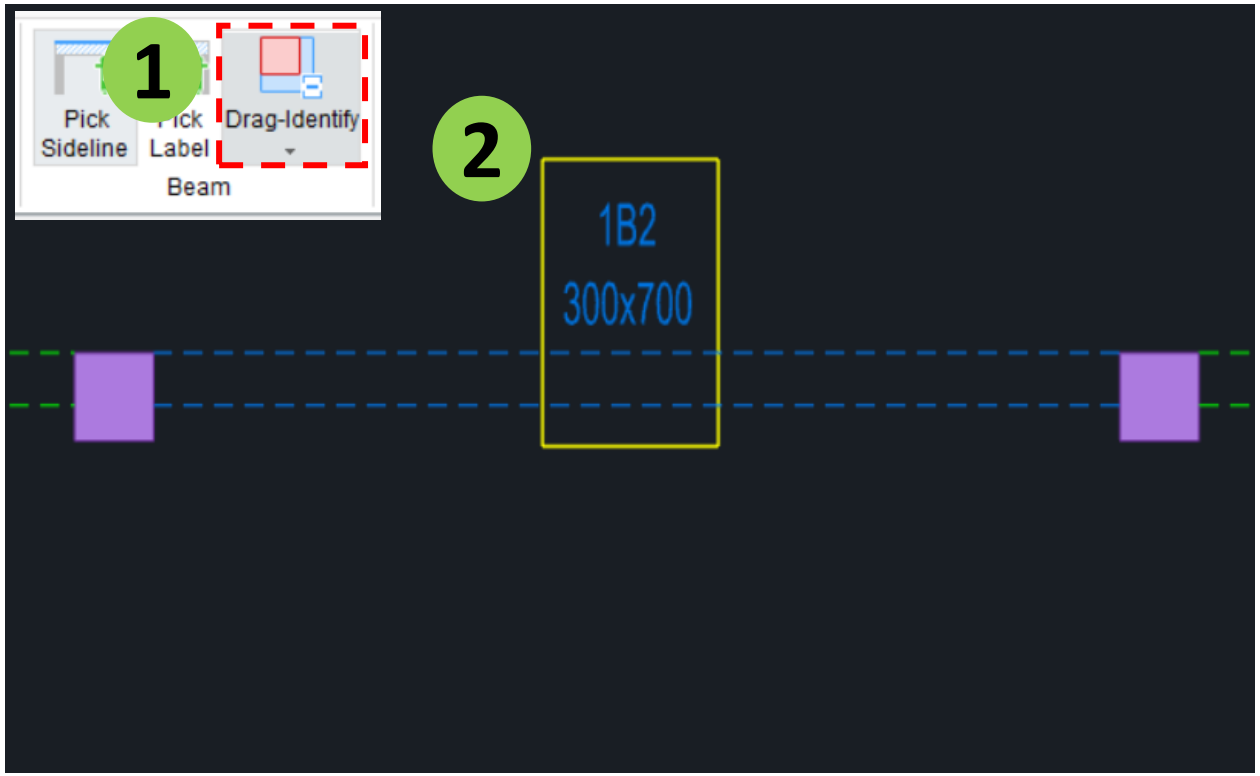
- Step 1: Tab {Identify}, Select [Click-Identify]
- Step 2: Select the beam name, right click
- Step 3: Select the beam sideline, right click

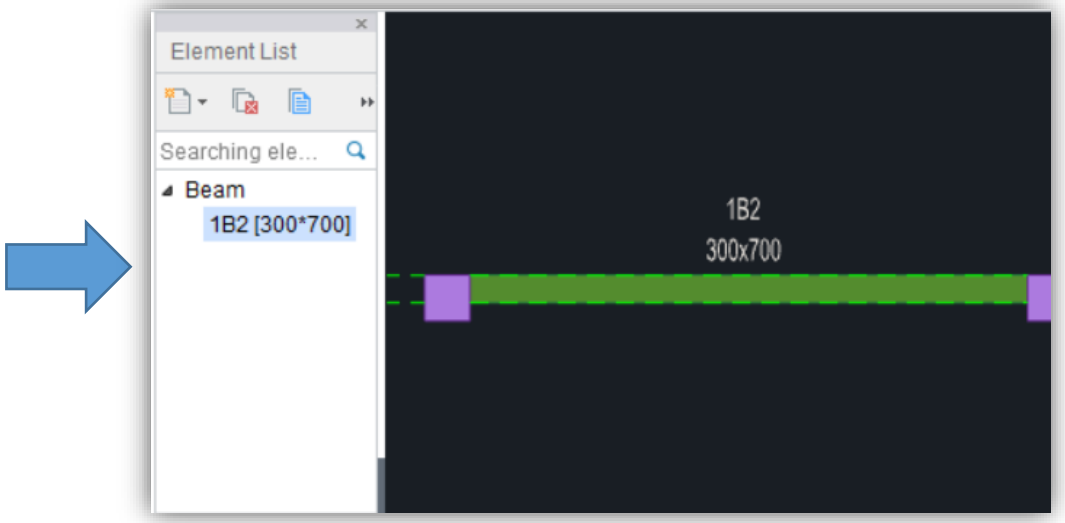




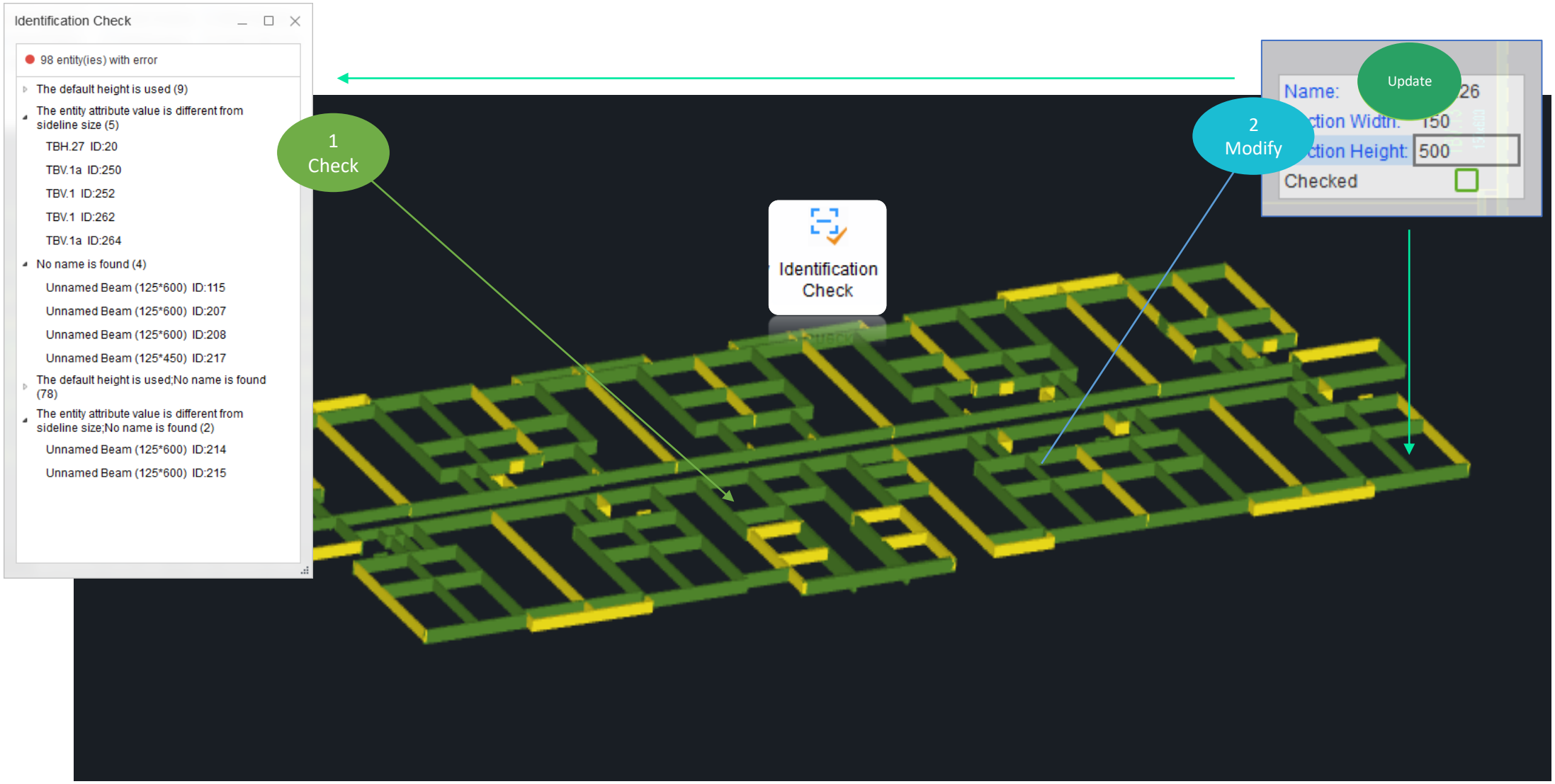
5.4(ii) Identify Beam – By [Drag-Identify] Selected area

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





5.4b Identification Check

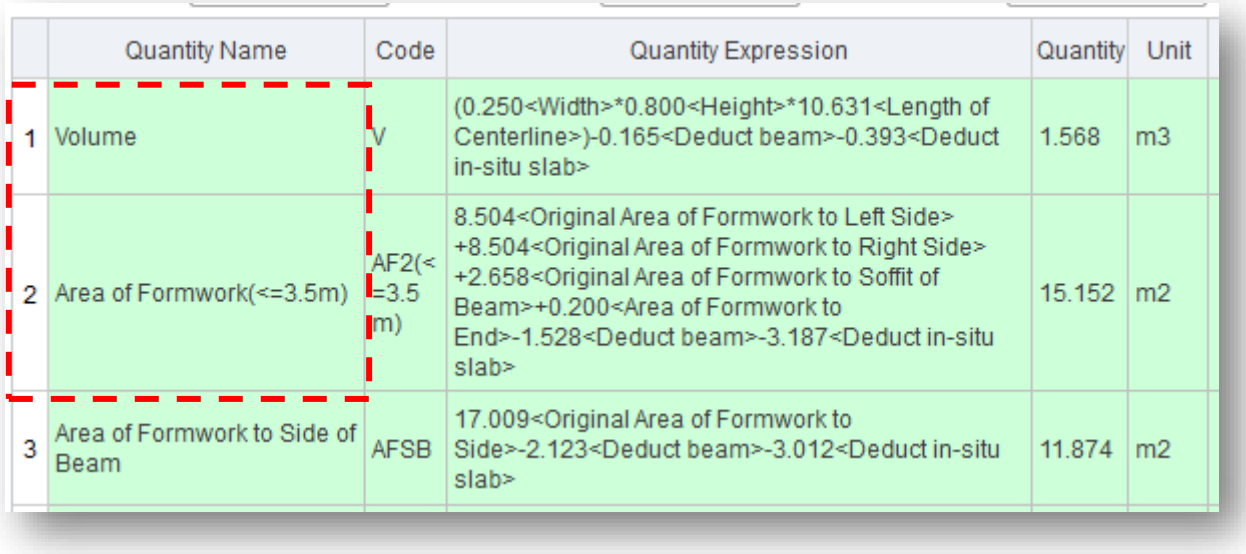


5.4c Quantity of Beam

Notes:

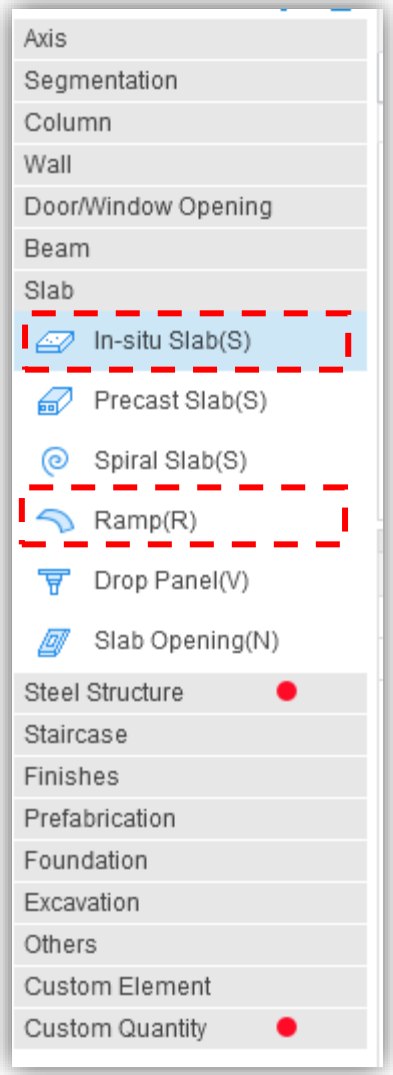
Which quantity to extract for SUSPENDED BEAM

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



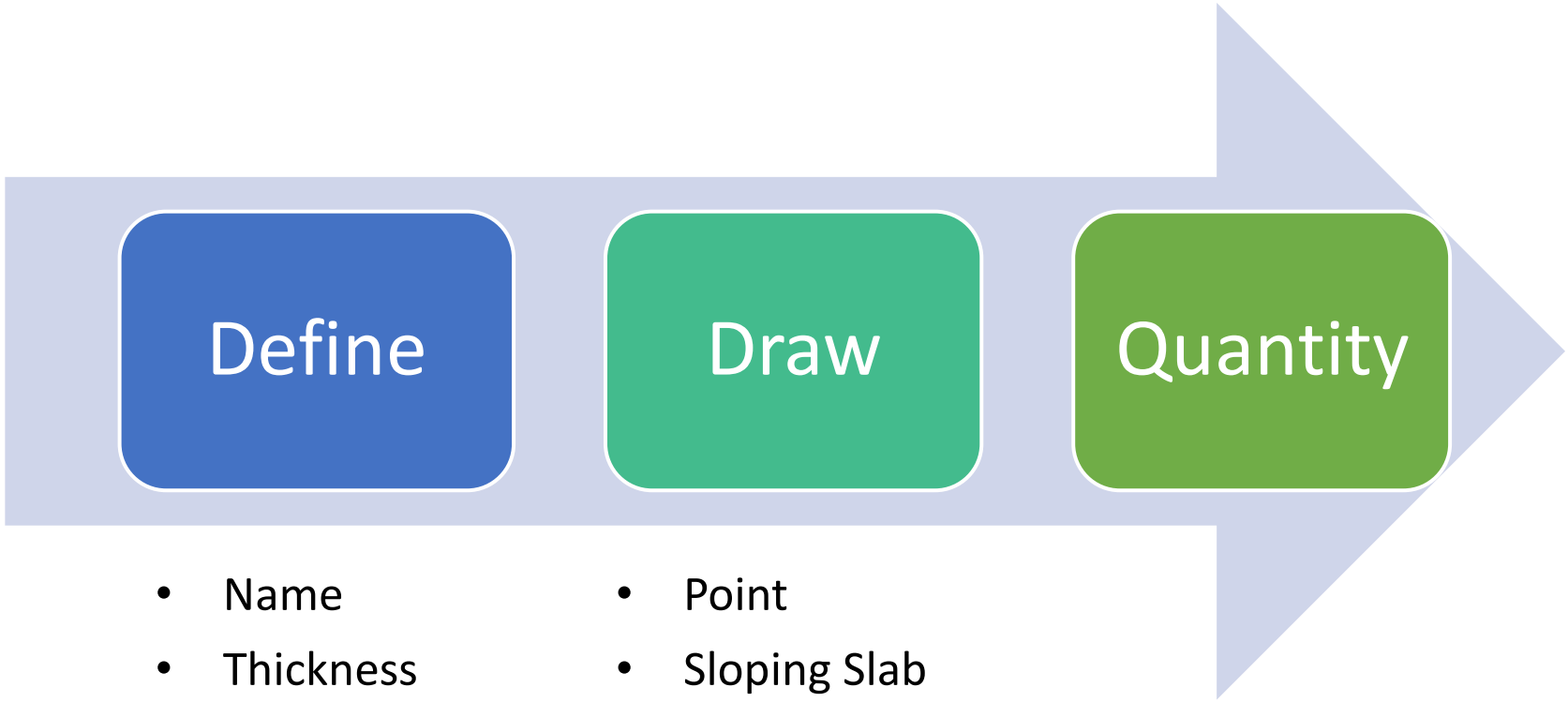
	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	(0.250<Width>*0.800<Height>*10.631<Length of Centerline>)-0.165<Deduct beam>-0.393<Deduct in-situ slab>	1.568	m3
2	Area of Formwork(<=3.5m)	AF2(<=3.5m)	8.504<Original Area of Formwork to Left Side> +8.504<Original Area of Formwork to Right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

Area Type



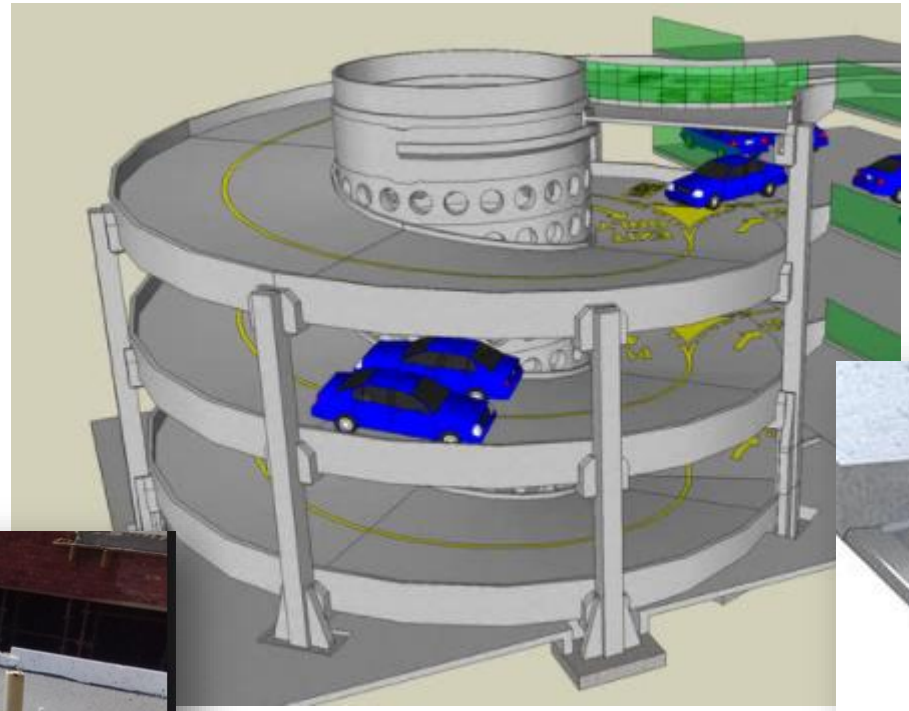
Slab

5.5 In-situ Slab/ Sprial Ramp / Steel Slab



5.5 In-situ Slab/ Ramp/ Steel Slab

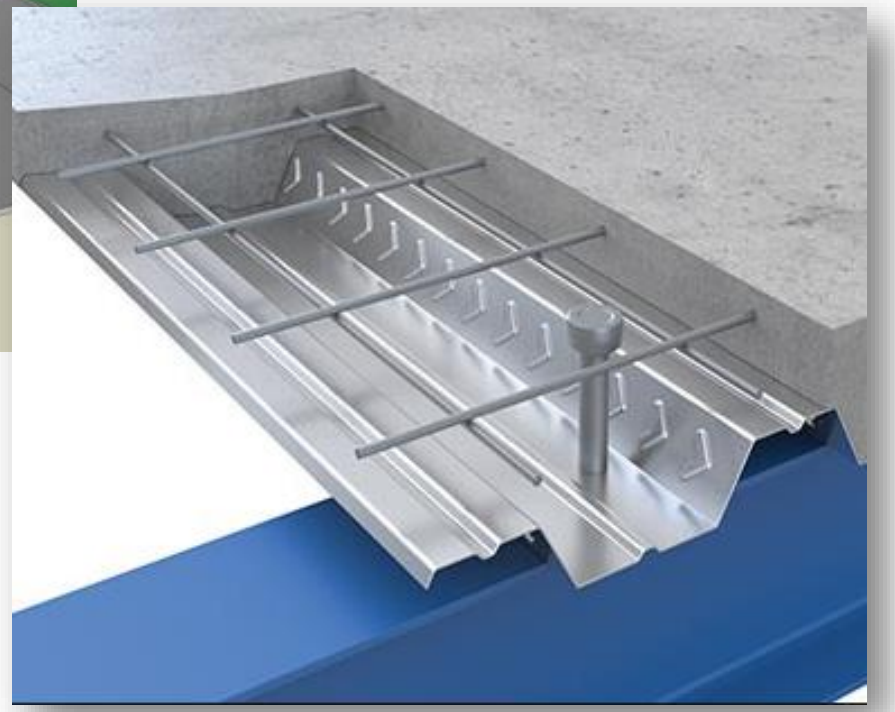
- Type of Slab



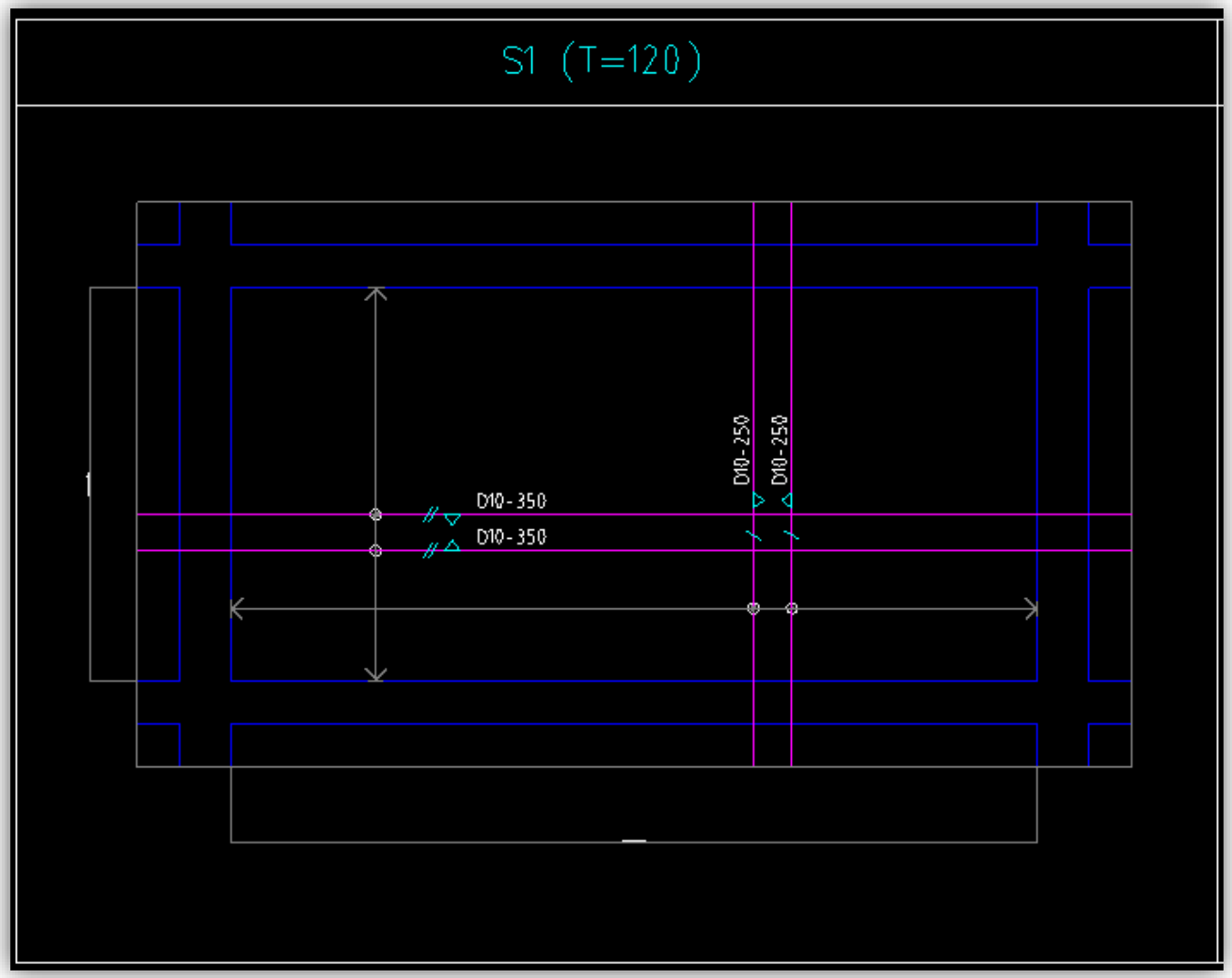
spiral ramp

In-Situ Slab

Bondek Slab



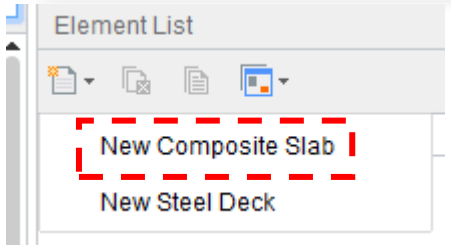
5.5a Define Slab

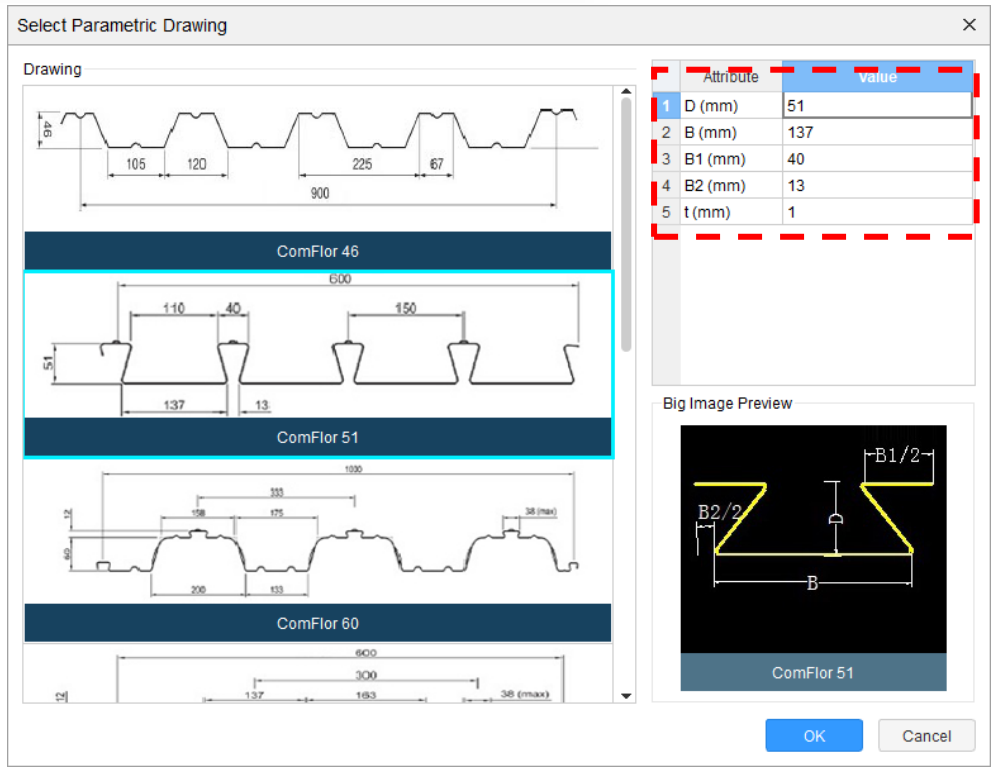


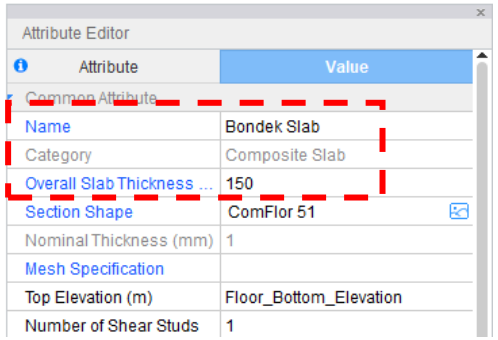
Attribute	Value	Add
Common Attribute		
Name	S1	
Category	Suspended Slab	☐
Thickness (mm)	(120)	☐
Top Elevation (m)	Floor_Bottom_Elevation	☐
Material	In-situ Concrete	☐
Concrete Grade	(25.00)	☐
Formwork Type	(Common Formwork)	☐
Entity Type	(Horizontal)	☐

5.5a Define Steel Slab

BONDEK SLAB TO BE 150mm THK



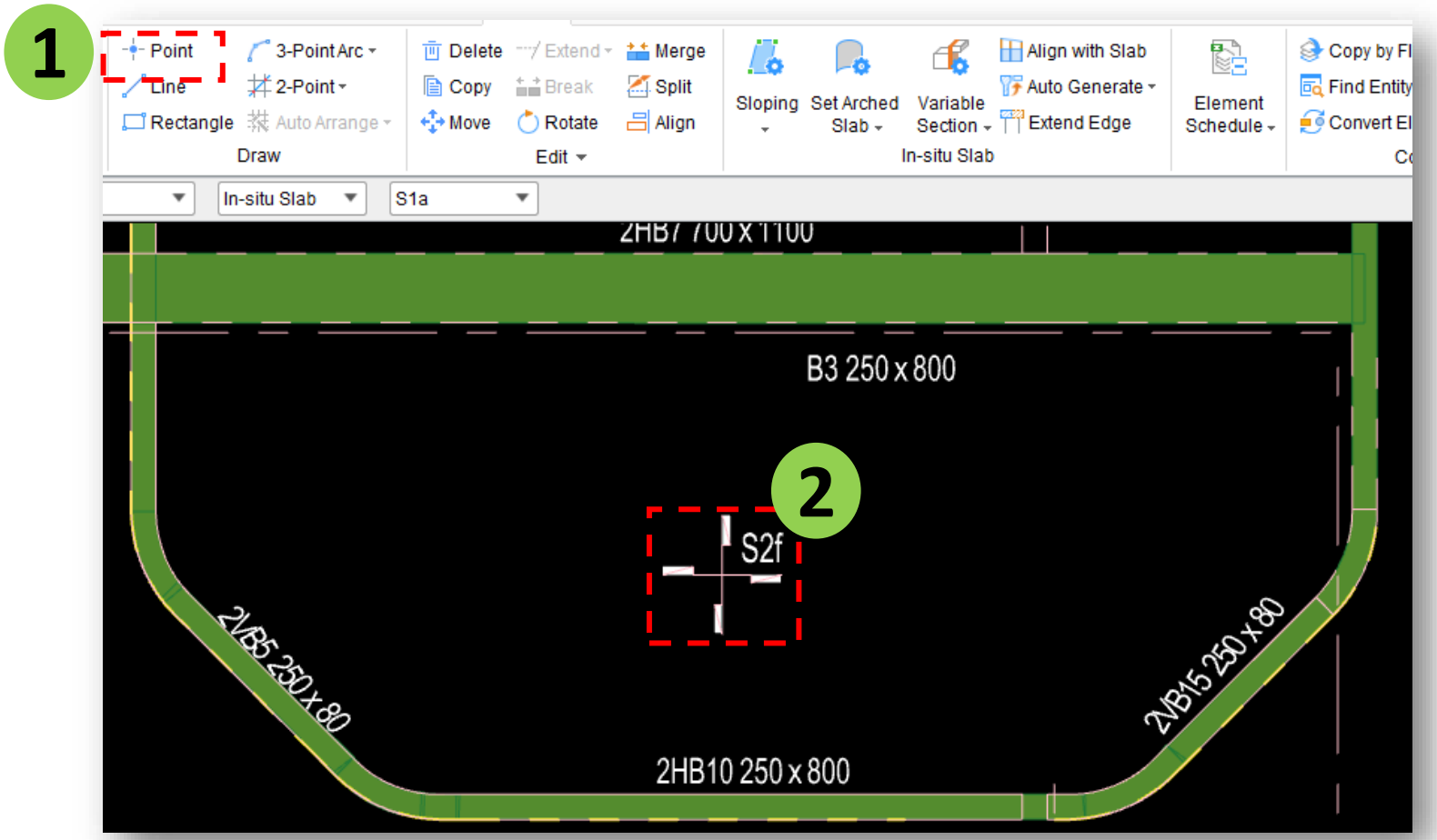




Bondek Slab

5.5b Draw Slab

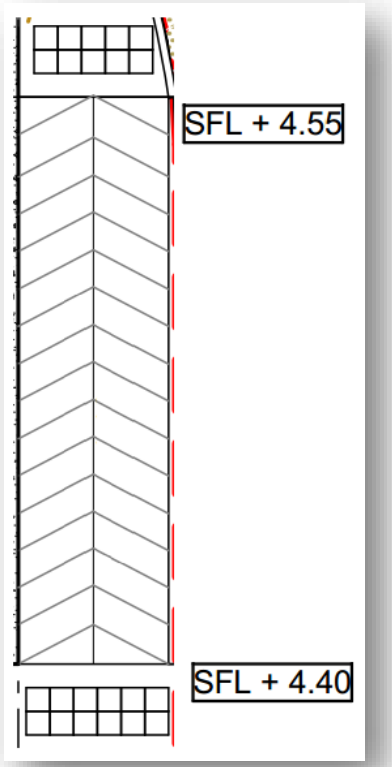
- Step 1: Tab {Draw}, Click [Point]
- Step 2: Point to an enclosed area by wall/beam

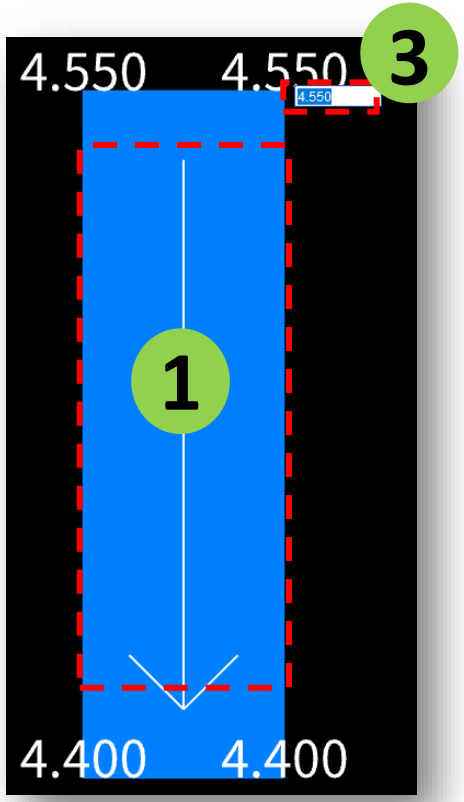


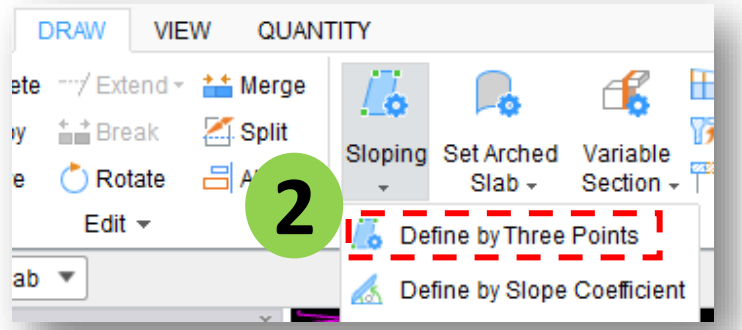
5.5b Draw Slab (cont'd)

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



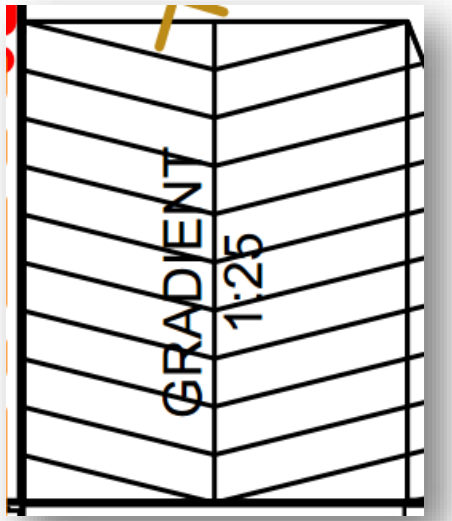


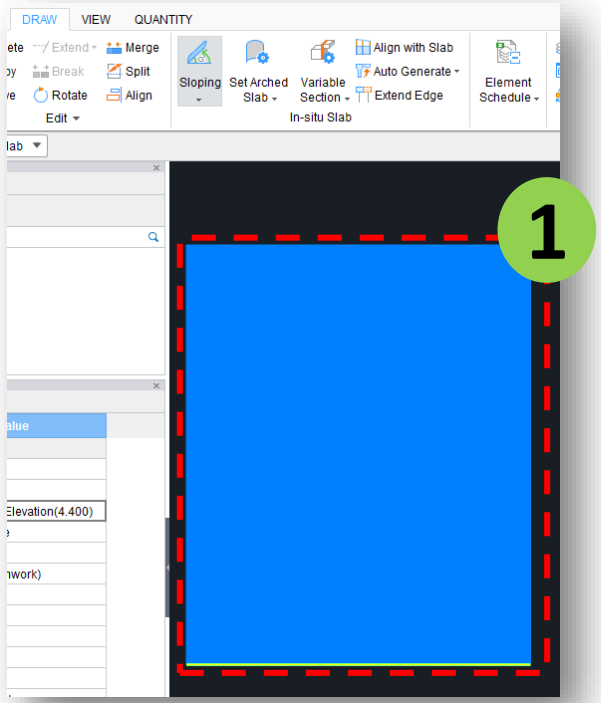


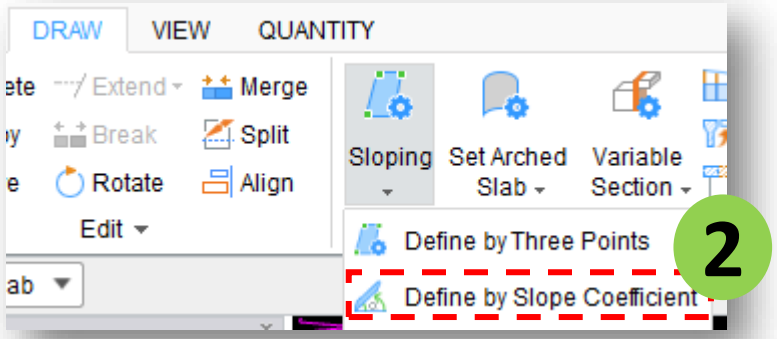
5.5b Draw Slab (cont'd)

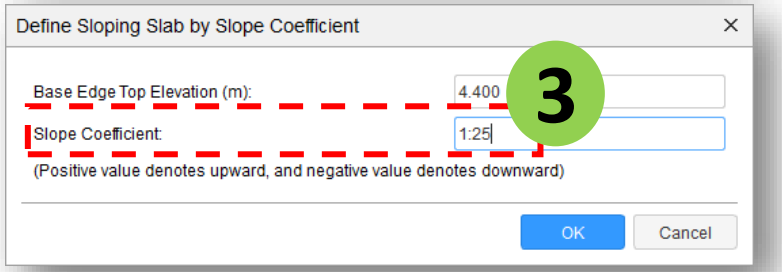
To do sloping slab with gradient given

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





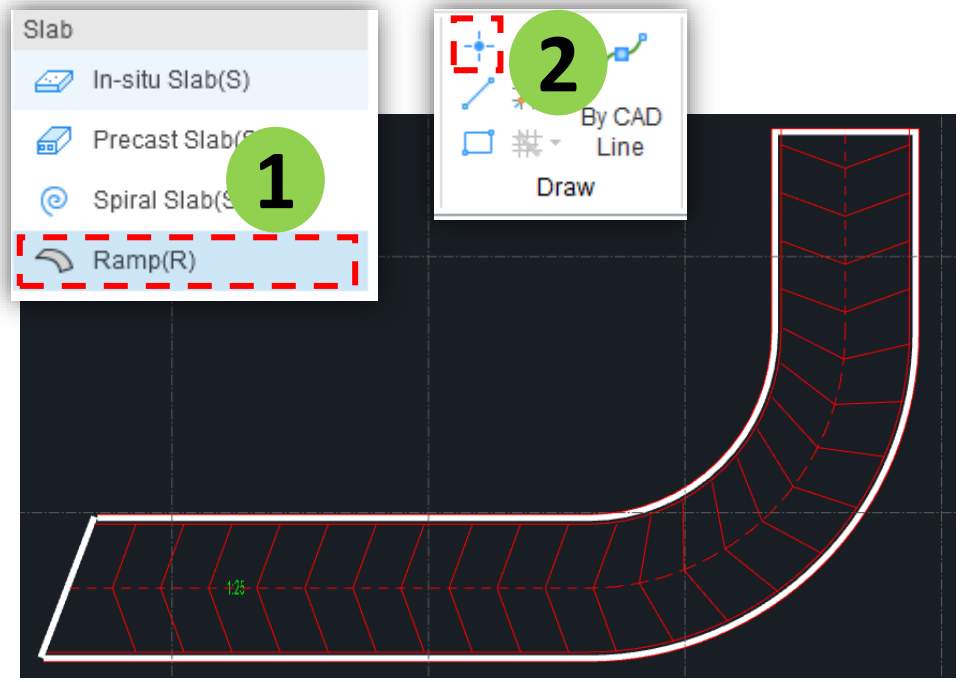


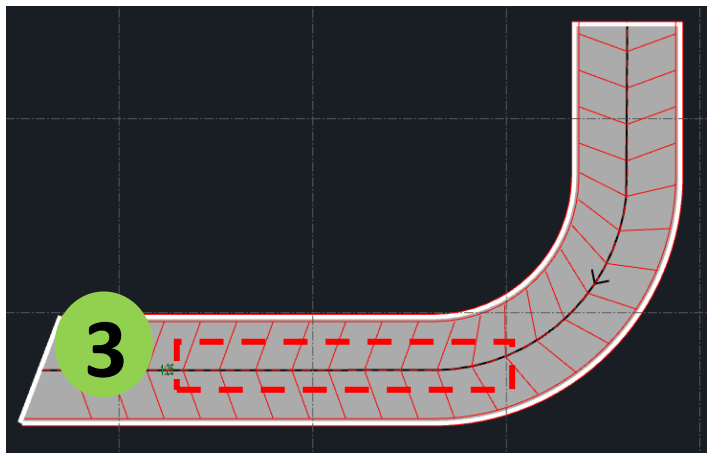


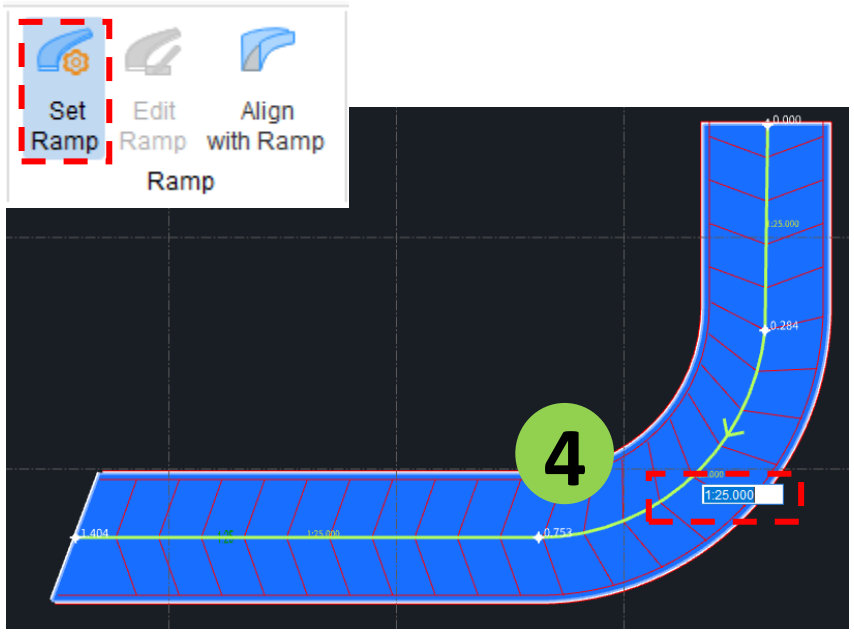
5.5b Draw Spiral Ramp

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





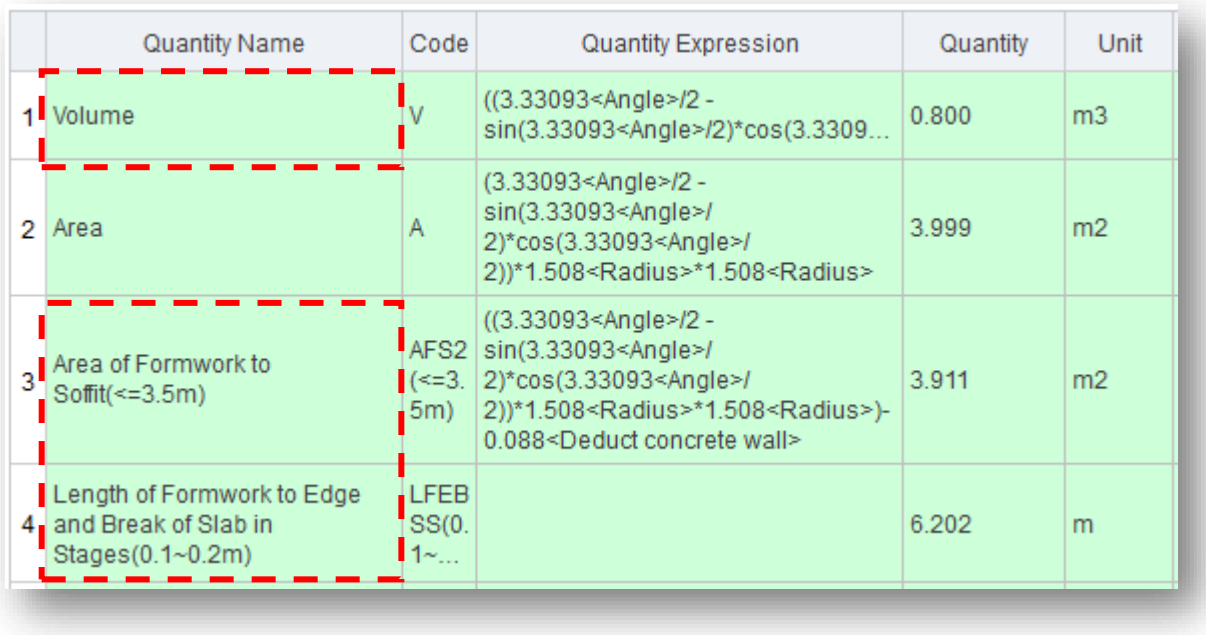


5.5c Quantity of Slab

Notes:

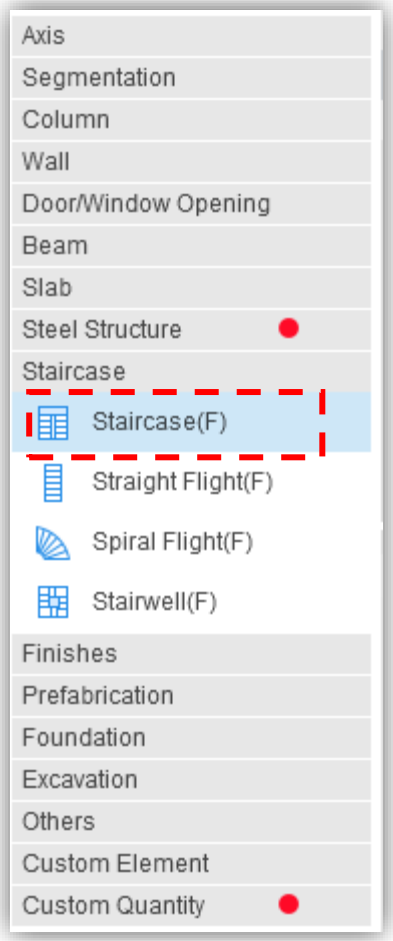
Which quantity to extract for SUSPENDED SLAB

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



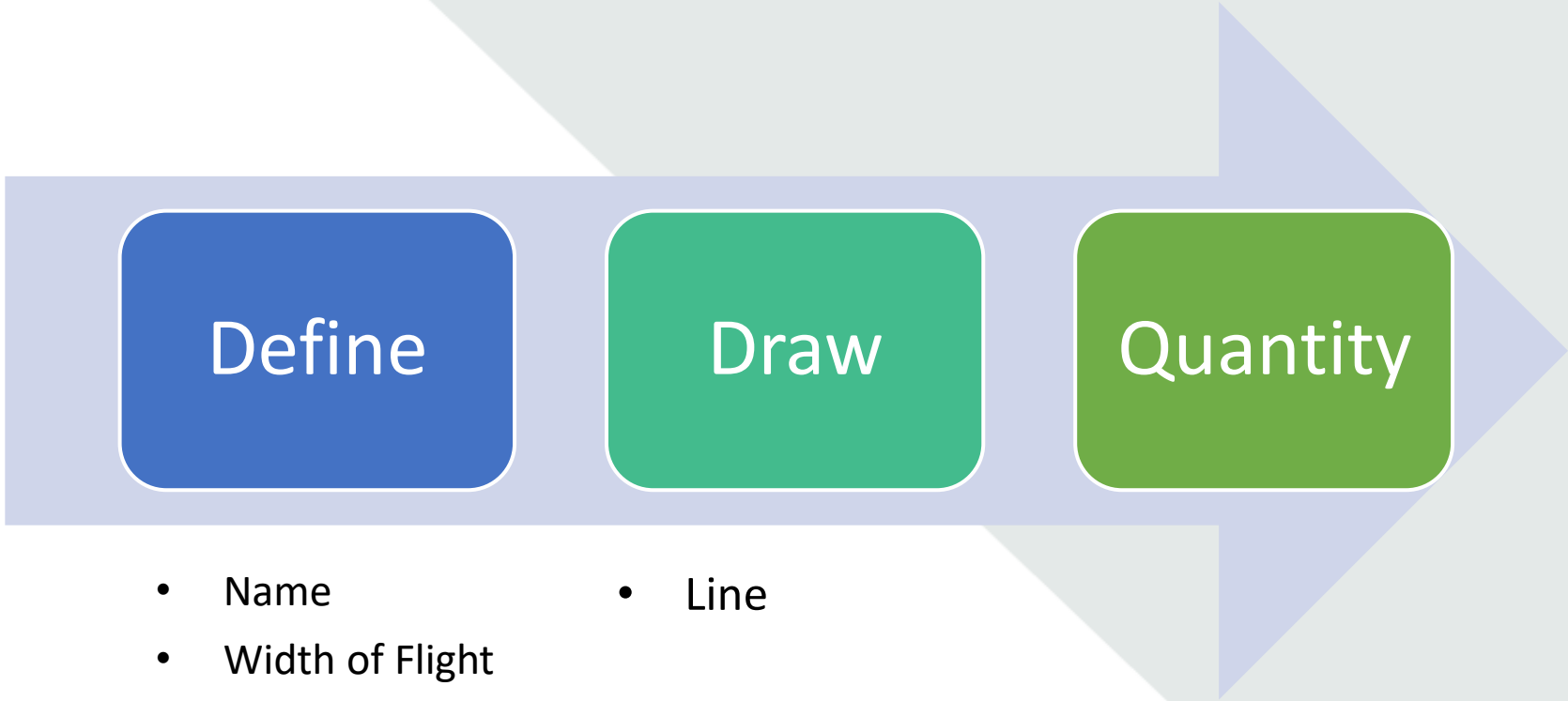
	Quantity Name	Code	Quantity Expression	Quantity	Unit
1	Volume	V	((3.33093<Angle>/2 - sin(3.33093<Angle>/2)*cos(3.3309...	0.800	m3
2	Area	A	(3.33093<Angle>/2 - sin(3.33093<Angle>/2)*cos(3.33093<Angle>/2))*1.508<Radius>*1.508<Radius>	3.999	m2
3	Area of Formwork to Soffit(<=3.5m)	AFS2(<=3.5m)	((3.33093<Angle>/2 - sin(3.33093<Angle>/2)*cos(3.33093<Angle>/2))*1.508<Radius>*1.508<Radius>)-0.088<Deduct concrete wall>	3.911	m2
4	Length of Formwork to Edge and Break of Slab in Stages(0.1~0.2m)	LFEBSS(0.1~...		6.202	m

Composite Type



Staircase

5.5 Staircase

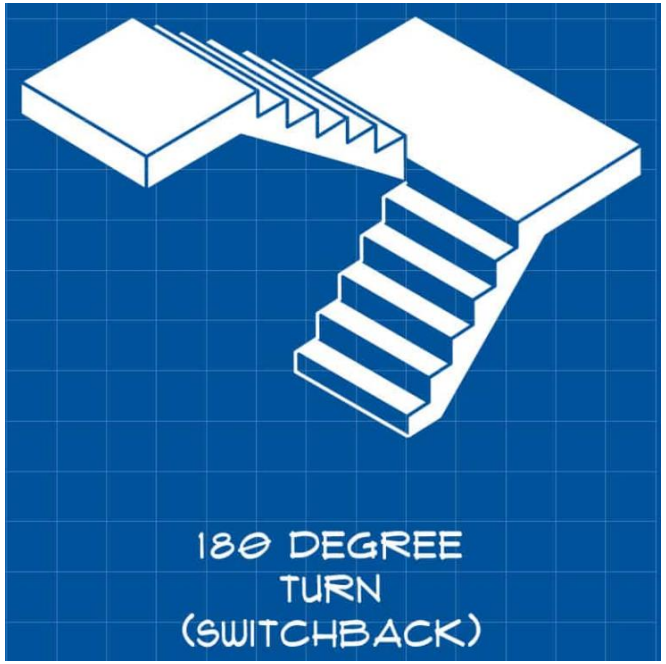


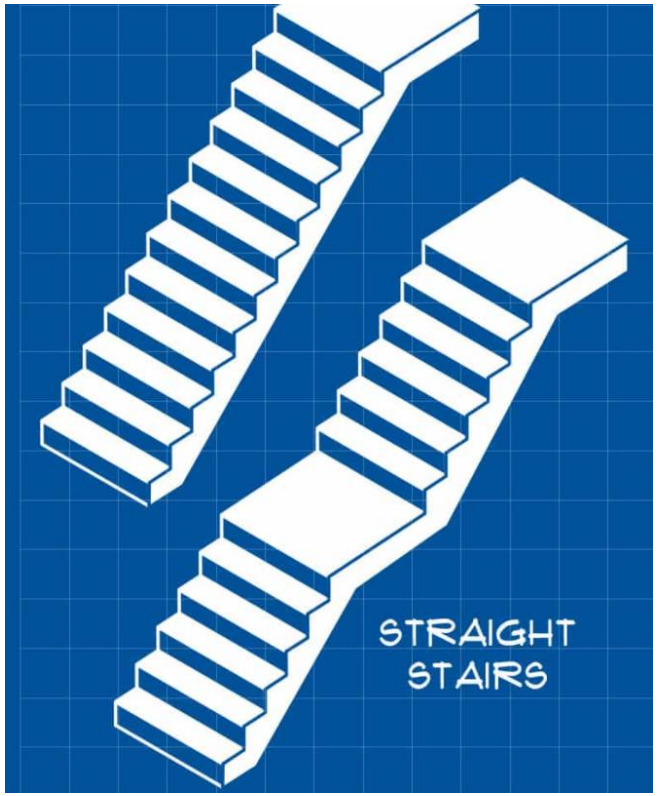
- Name
- Width of Flight
- Depth of Tread
- Height of Riser
- Width of Landing

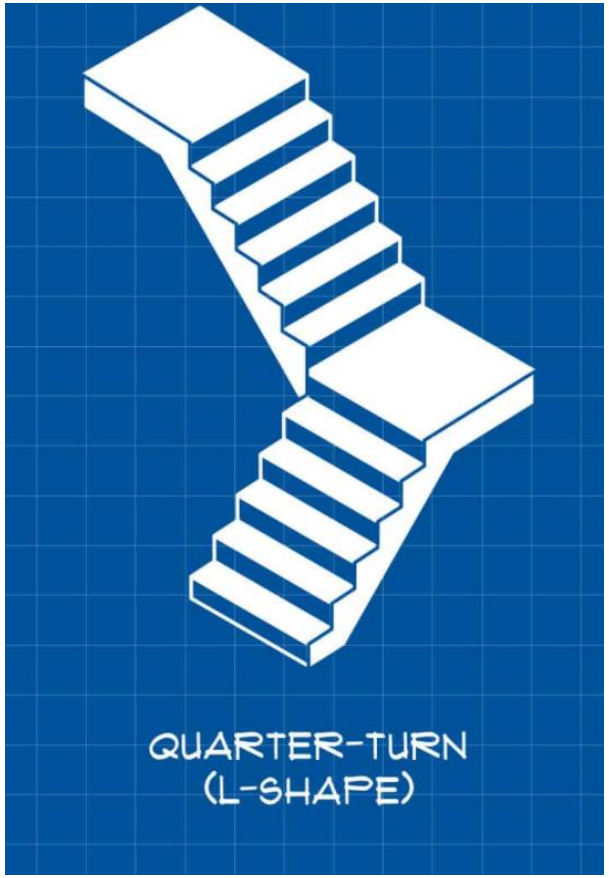
- Line

5.5a Type of Staircase

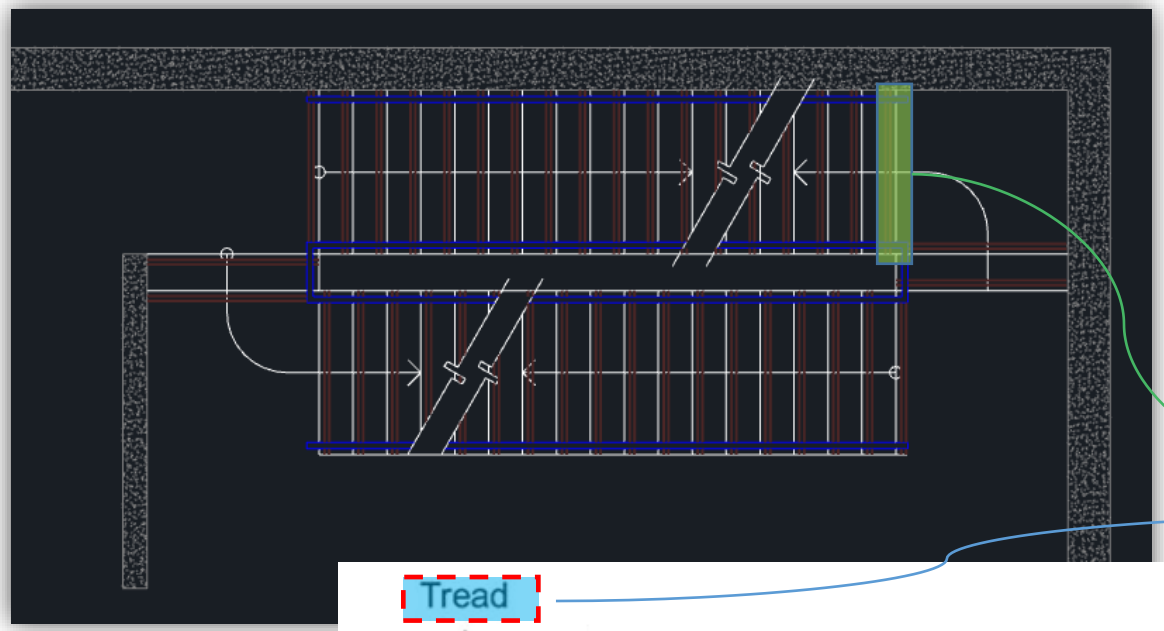
- Type of Staircase

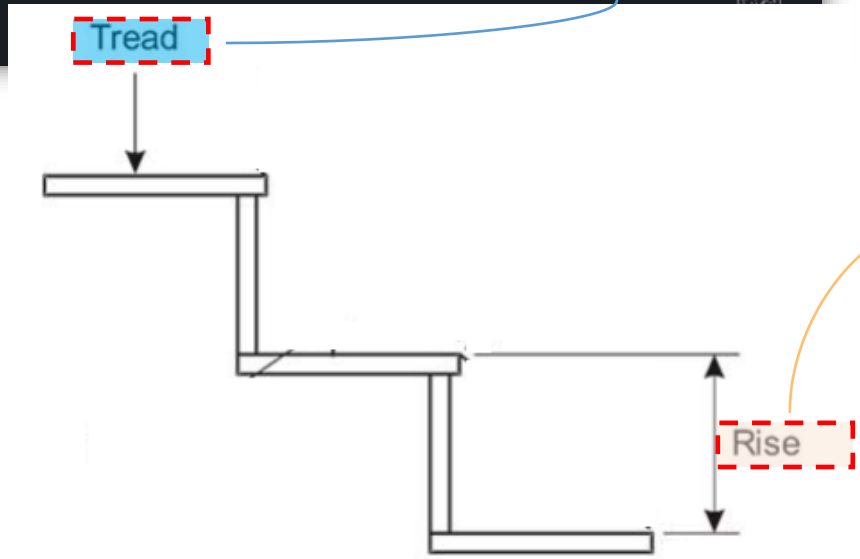






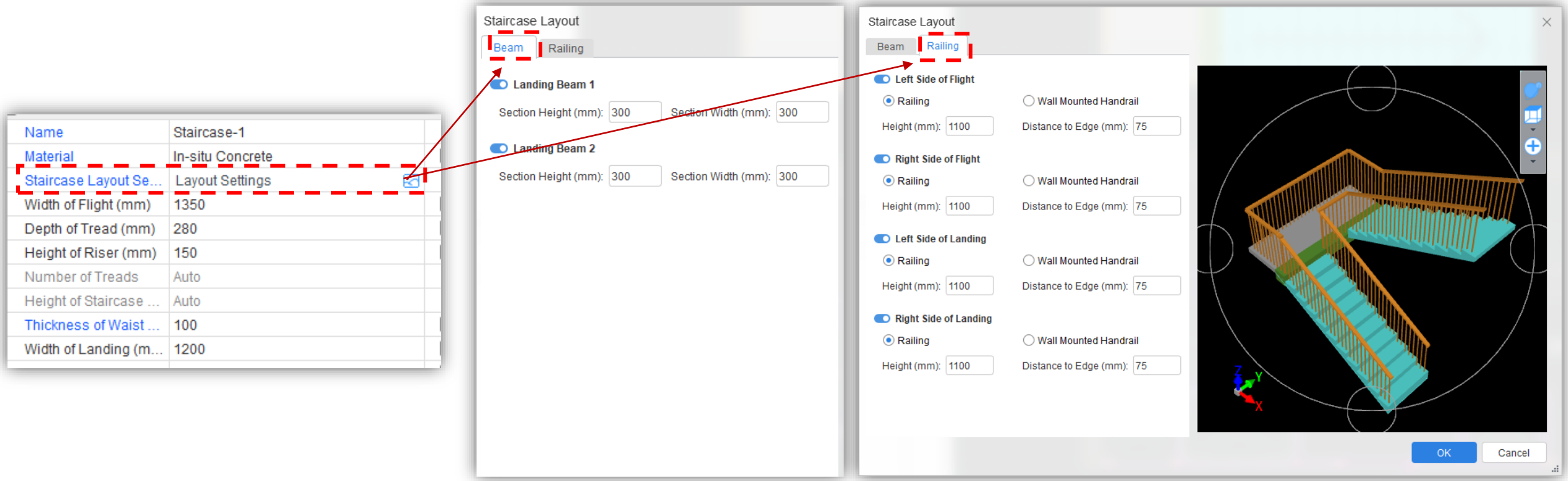
5.5a Define Staircase





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

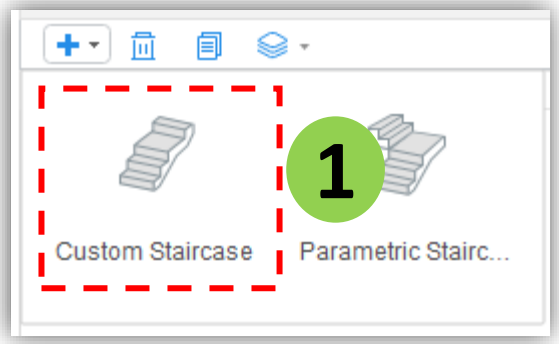


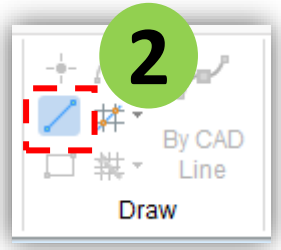
5.5a Draw Staircase

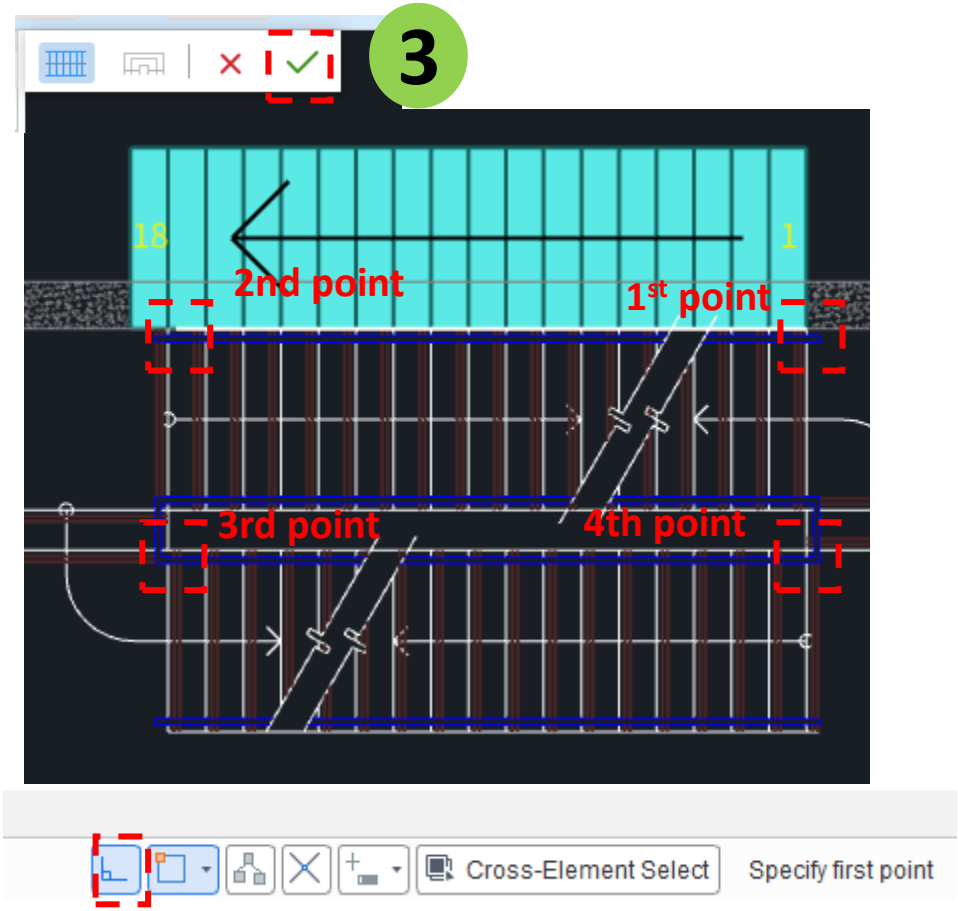
- Step 1: Tab {Draw}, Select Staircase-Custom Staircase
- Step 2: Use Line to draw Staircase ,F4 switch the insert point；

*suggest to open Orthogonal model when draw staircase

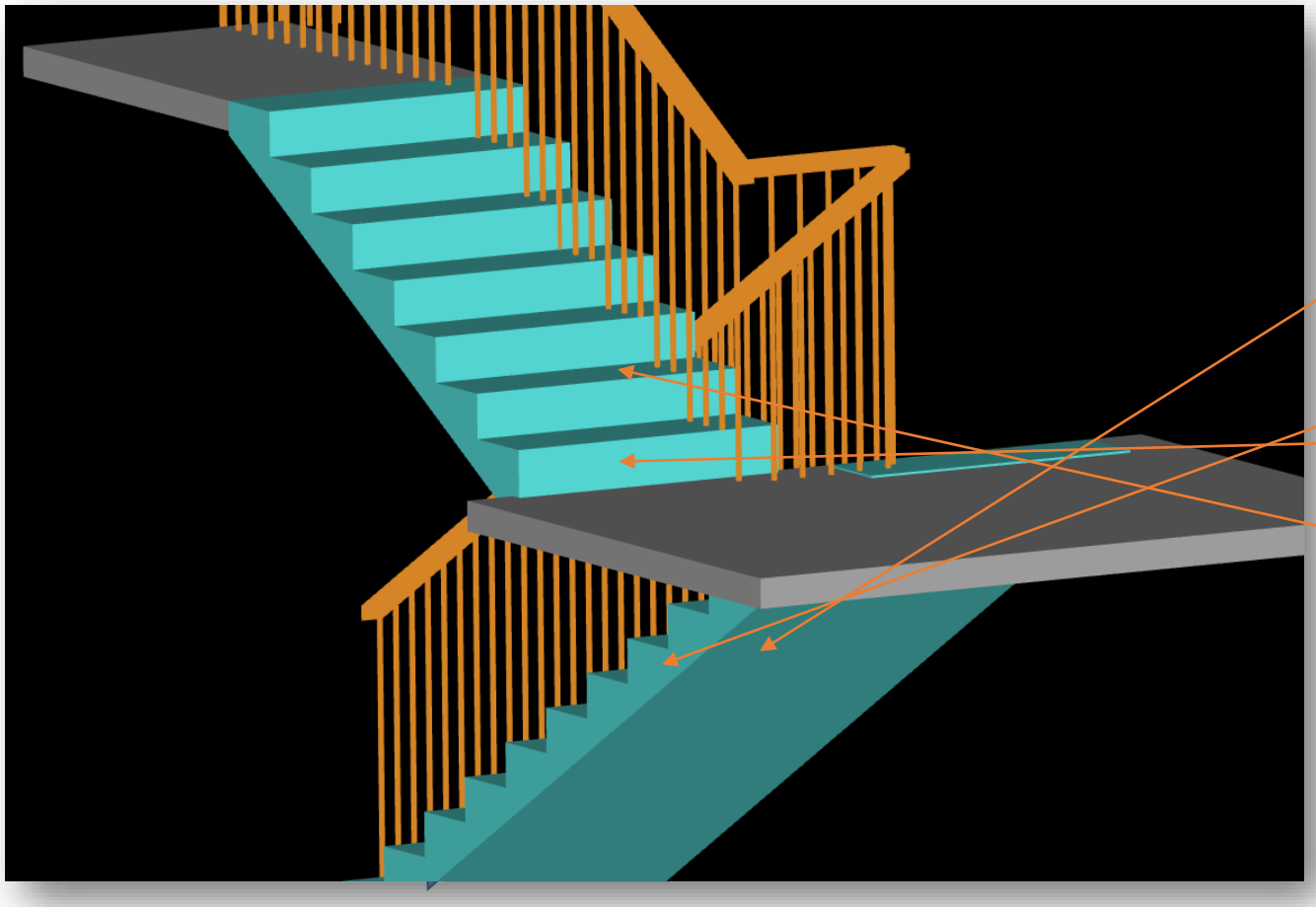
- Step 3: Click Ok to finish







Quantity of Staircase



Projected area	8.776<Original projected area>	8.776
Volume	1.200<Volume of flight>+0.327<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<Area of formwork to soffit of flight>+2.738<Area of formwork to landing slab>+2.182<Area of formwork to open string>+3.465<Area of formwork to riser>+0.773<Area of formwork to edge and break of landing slab>	16.395
Area of formwork to flight	7.236<Area of formwork to soffit of flight>+2.182<Area of formwork to open string>+3.465<Area of formwork to riser>	12.883
Area of formwork to landing slab	2.738<Area of formwork to landing slab>+0.773<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 Sl...	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

Quantity of Staircase(cont'd)

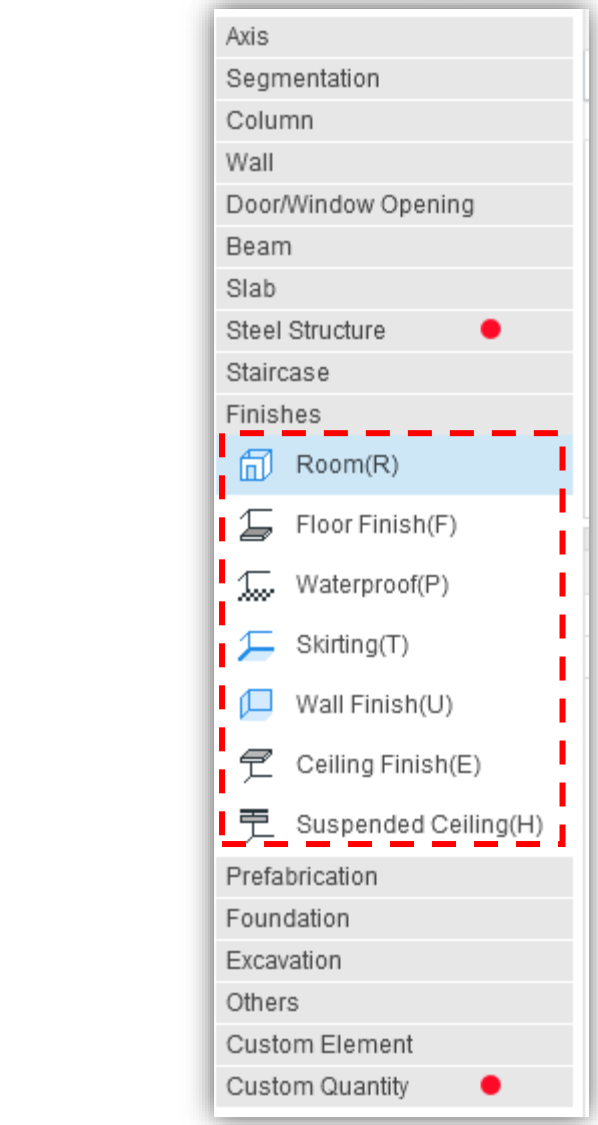
Notes:

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

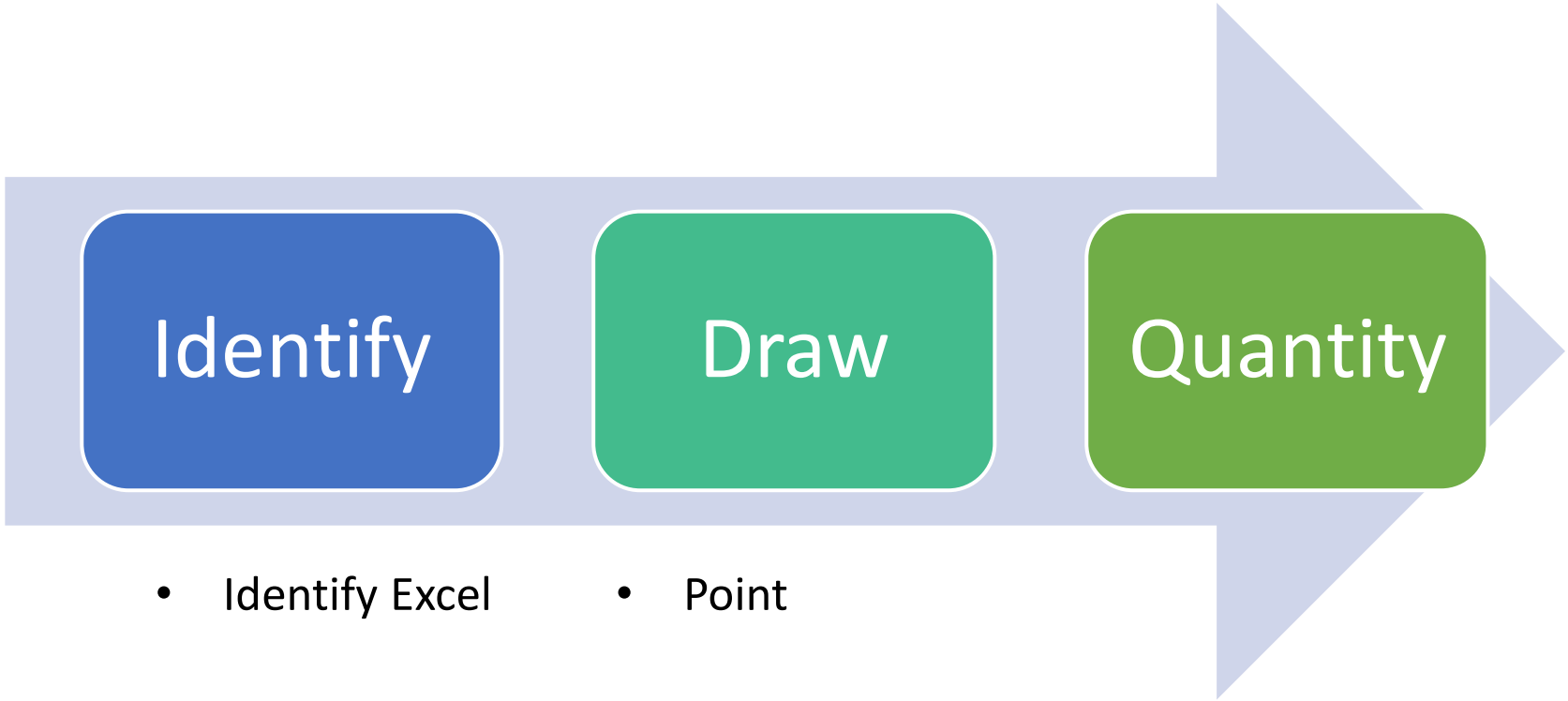
1	Entity Location: <4+5248;D+8311>				
2	Projected Area	PA	11.920<Original Projected Area>	11.920	m2
3	Volume	V	1.055<Volume of Flight>+0.632<Volume of Landing Sl...	1.687	m3
4	Volume of Concrete of Flight	VCF		1.055	m3
5	Volume of Concrete of Landing Slab	VCLS		0.632	m3
6	Area of Formwork	AF2	6.353<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



FINISHES

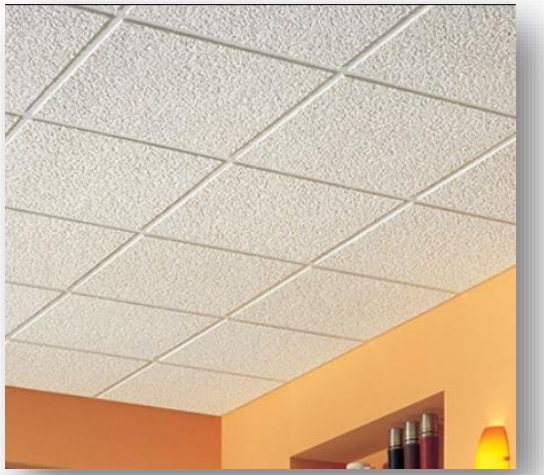
5.7 Finishes



5.7 Finishes

Flooring

Skirting



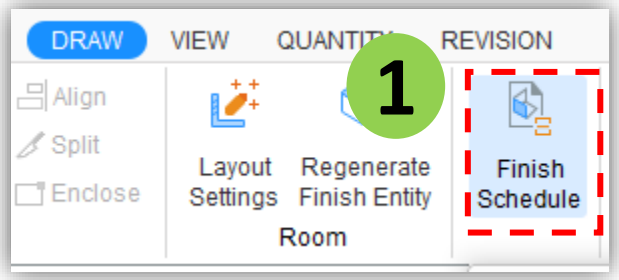
Suspended Ceiling

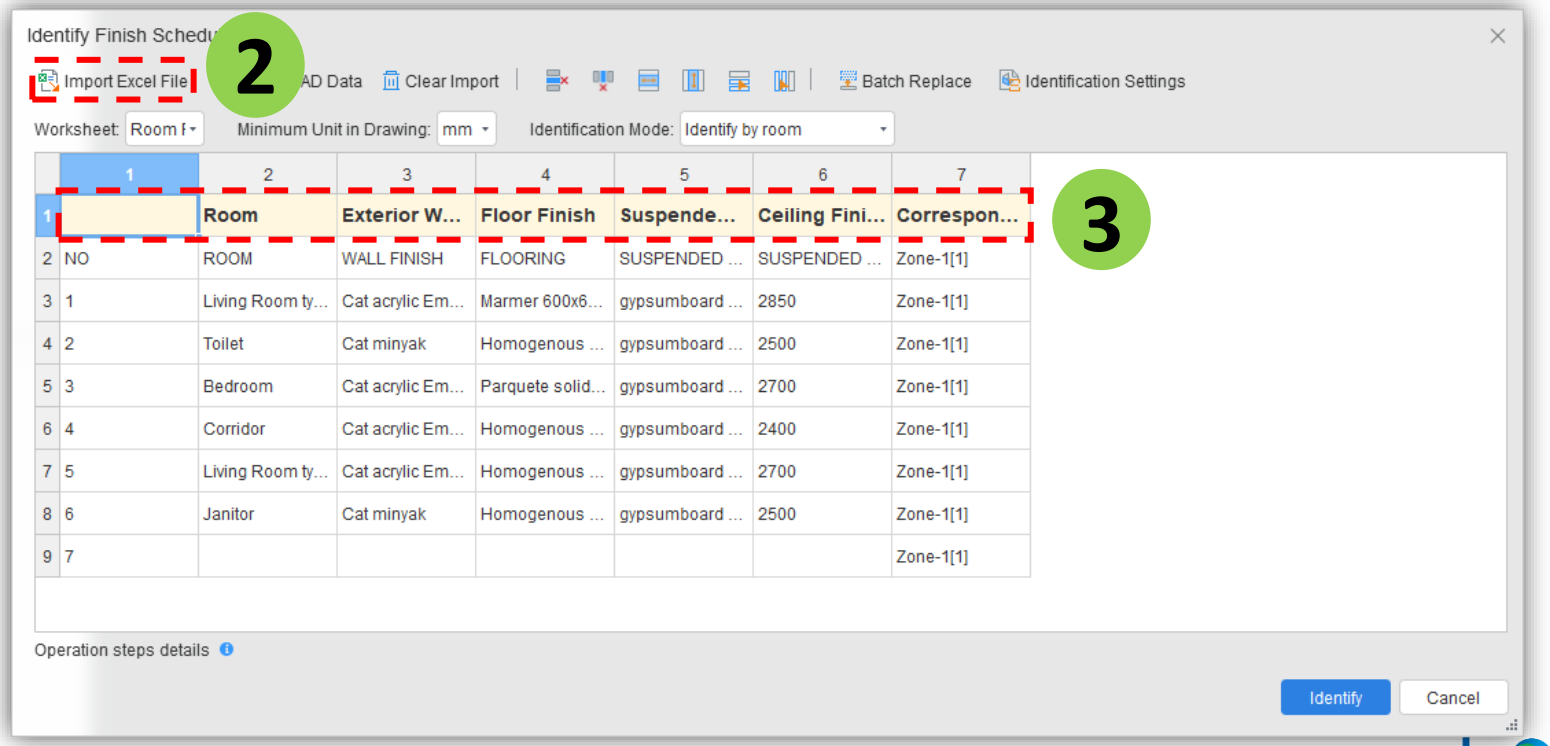
Wall Finishes

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

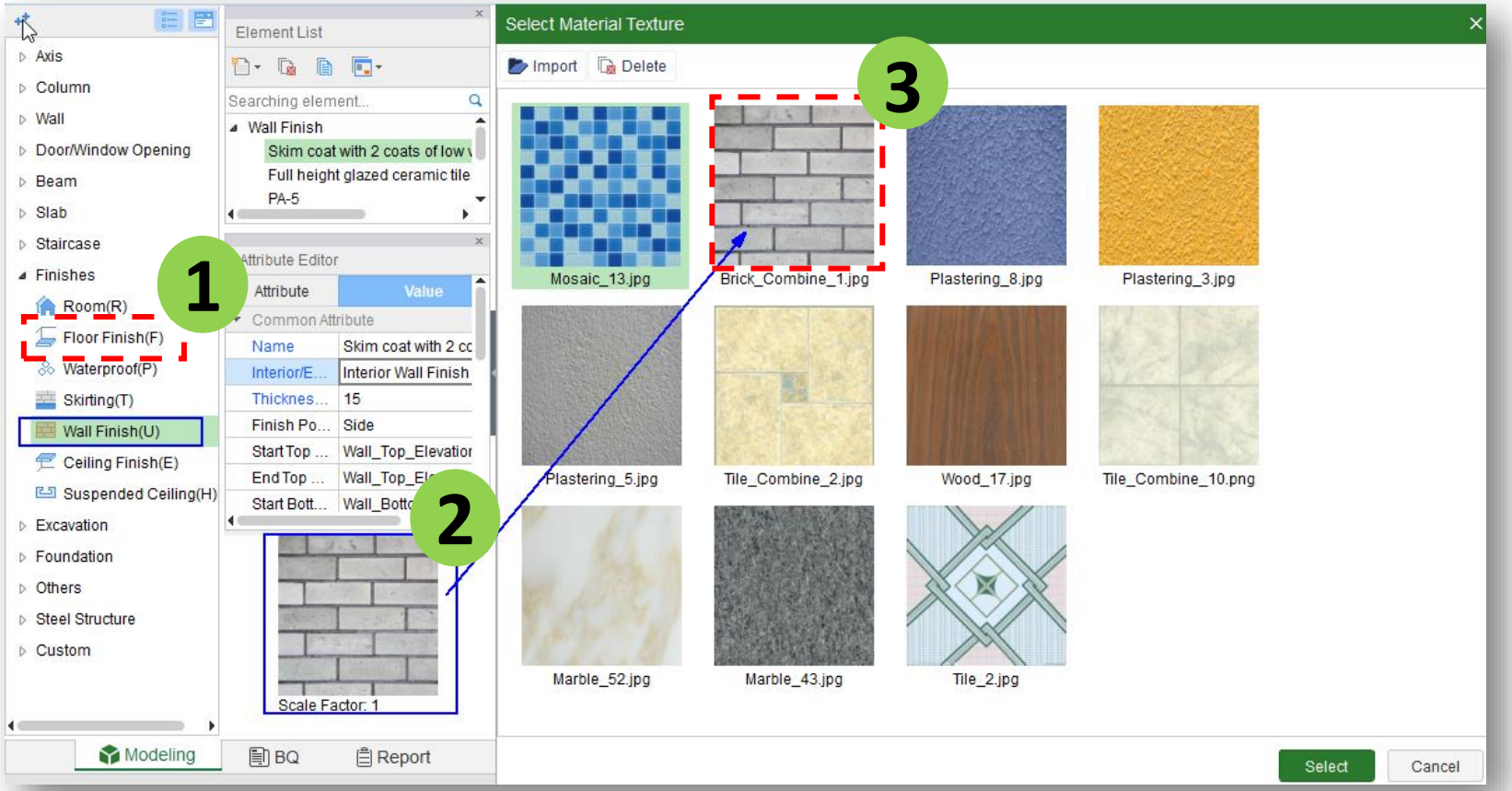




	1	2	3	4	5	6	7
1		Room	Exterior W...	Floor Finish	Suspende...	Ceiling Fini...	Correspon...
2	NO	ROOM	WALL FINISH	FLOORING	SUSPENDED ...	SUSPENDED ...	Zone-1[1]
3	1	Living Room ty...	Cat acrylic Em...	Marmer 600x6...	gypsumboard ...	2850	Zone-1[1]
4	2	Toilet	Cat minyak	Homogenous ...	gypsumboard ...	2500	Zone-1[1]
5	3	Bedroom	Cat acrylic Em...	Parquete solid...	gypsumboard ...	2700	Zone-1[1]
6	4	Corridor	Cat acrylic Em...	Homogenous ...	gypsumboard ...	2400	Zone-1[1]
7	5	Living Room ty...	Cat acrylic Em...	Homogenous ...	gypsumboard ...	2700	Zone-1[1]
8	6	Janitor	Cat minyak	Homogenous ...	gypsumboard ...	2500	Zone-1[1]
9	7						Zone-1[1]

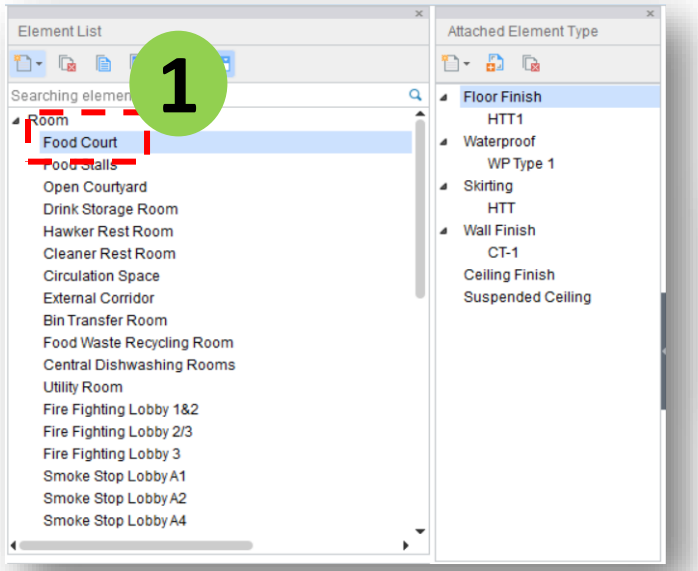
5.7a Change Finishing Material Texture

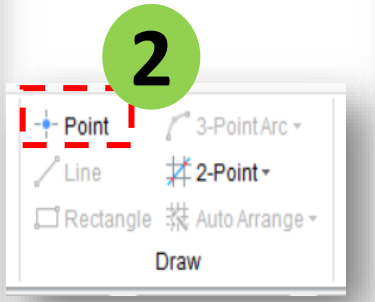
- Step 1: Tab {Draw}, Choose Floor Finishes / Wall Finishes
- Step 2: Double click Material Texture Area
- Step 3: Choose the material texture and select to confirm and attached

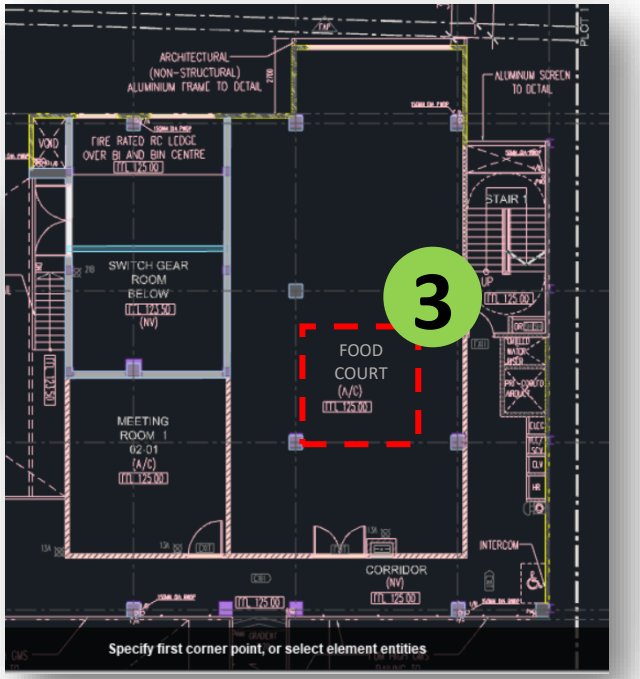


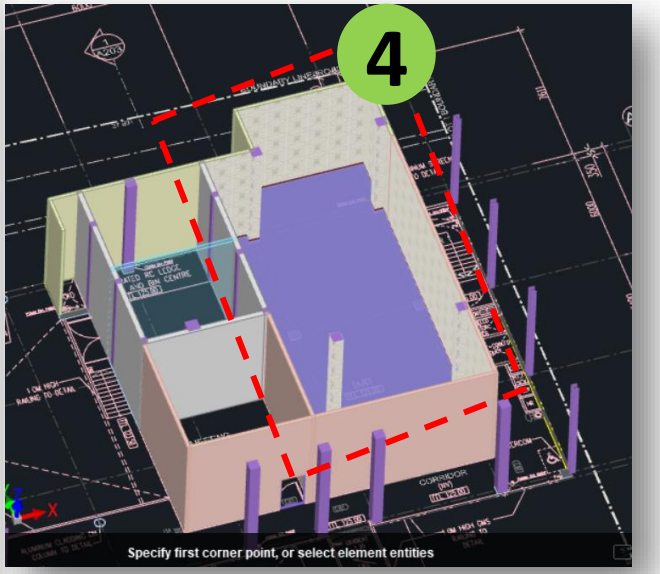
5.7b Draw Finishes

- 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





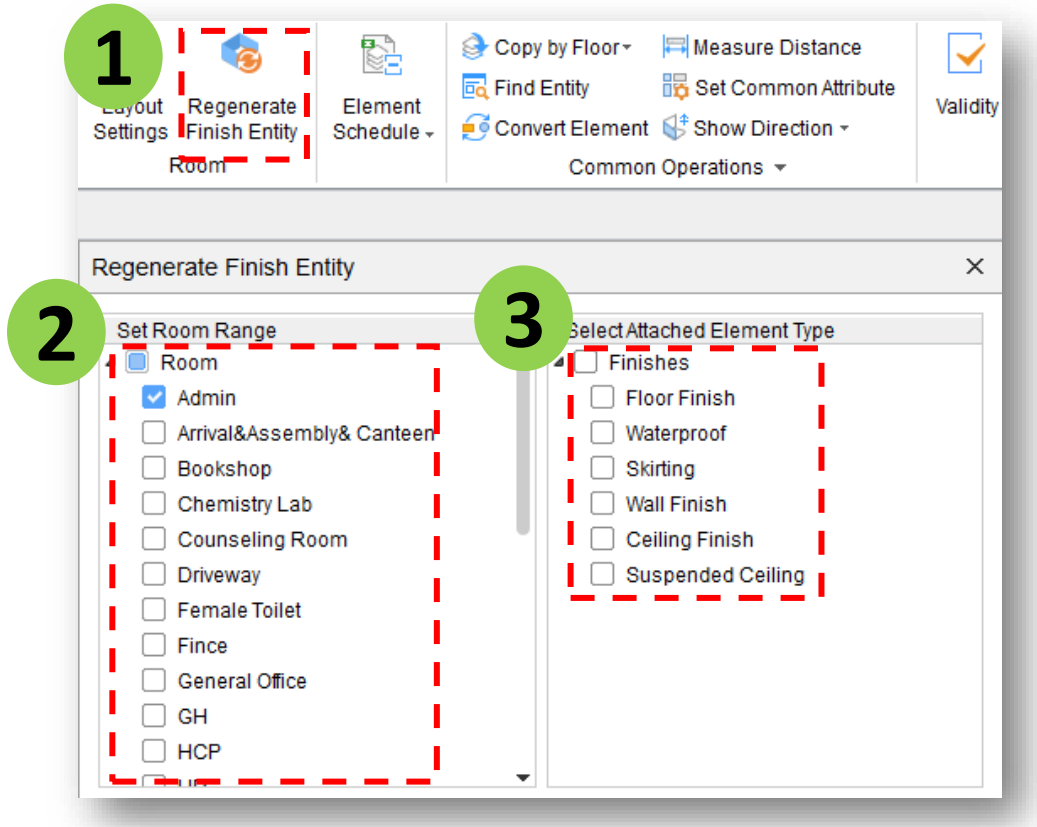




5.7b Draw Finishes (cont'd)

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

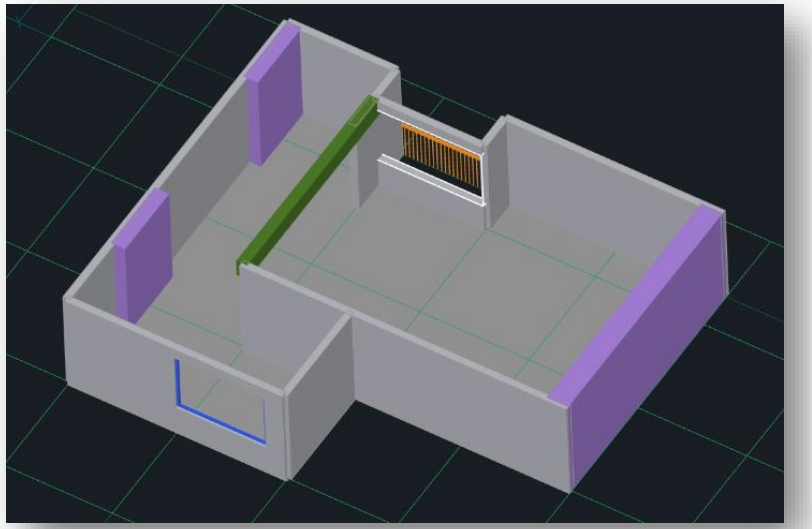
You can refresh all finishes in the room of the project this floor rapidly by using [Regenerate Finish Entity].

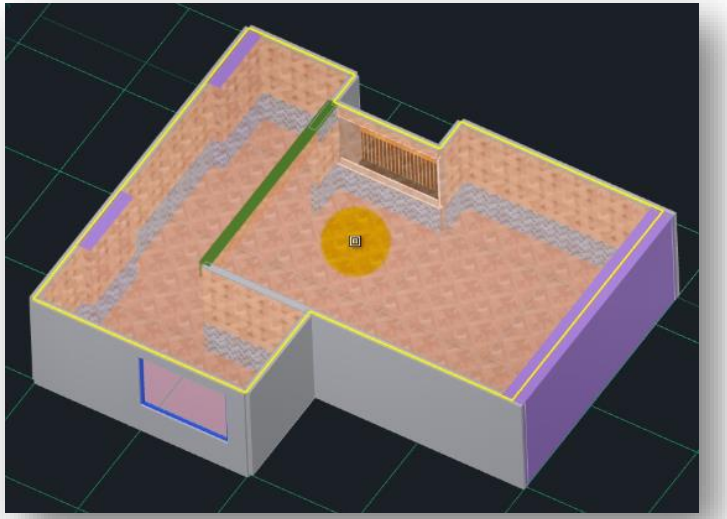


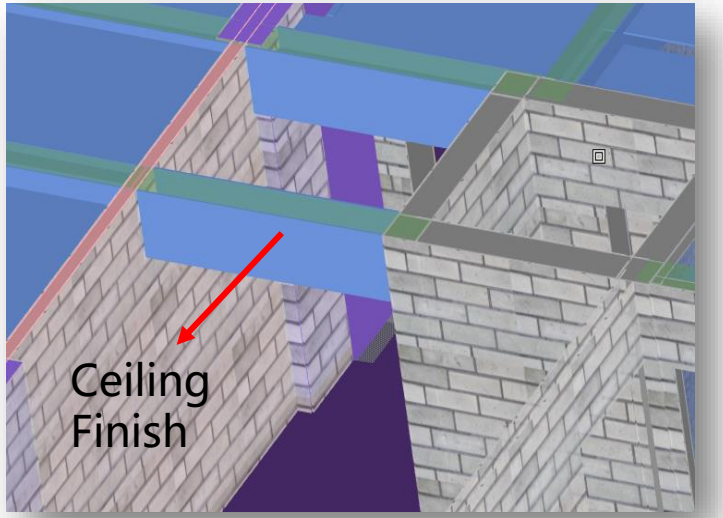
5.7c Quantity of Finishes

Notes:

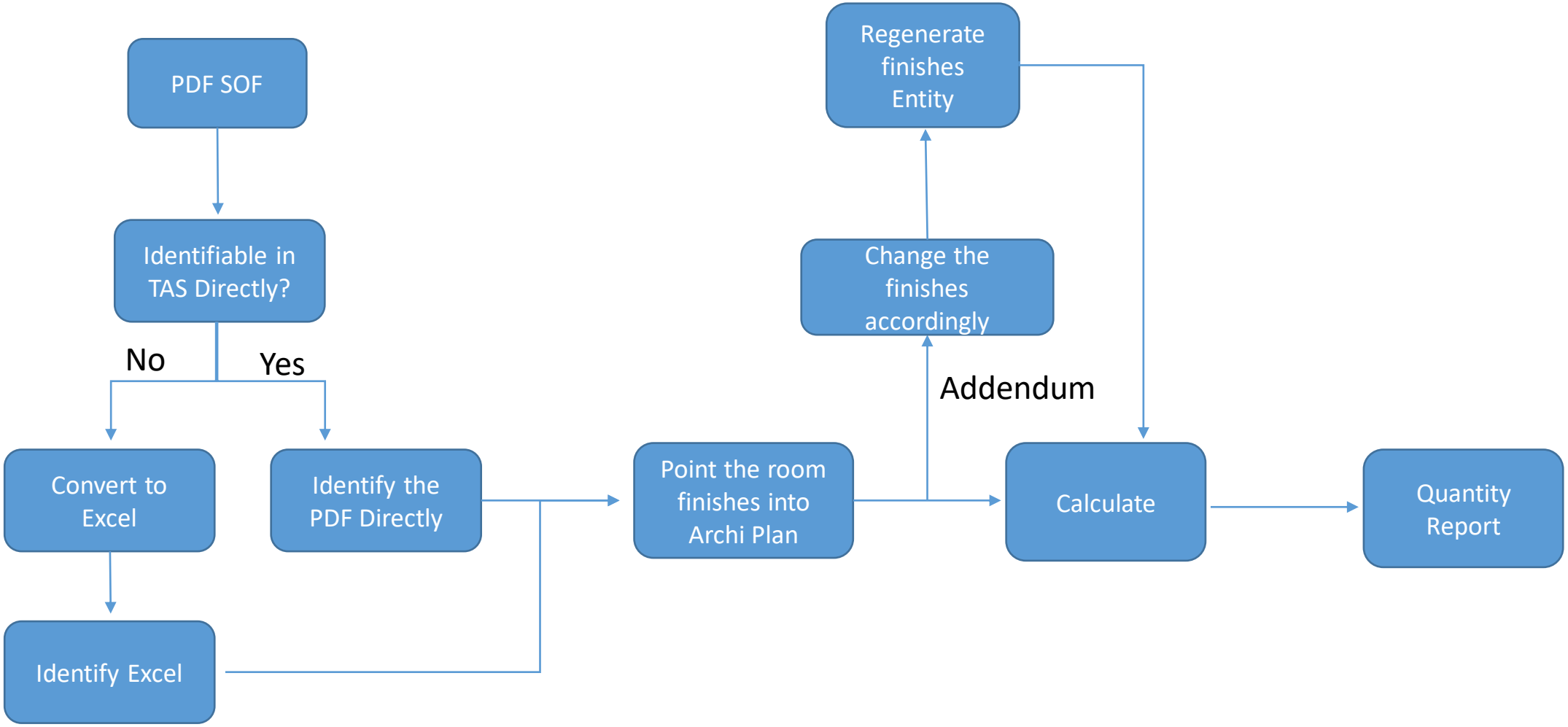
- Column can be part of the enclosed area
- Column protruding area will be captured automatically
- Upper floor beam exposed finishes will be captured automatically



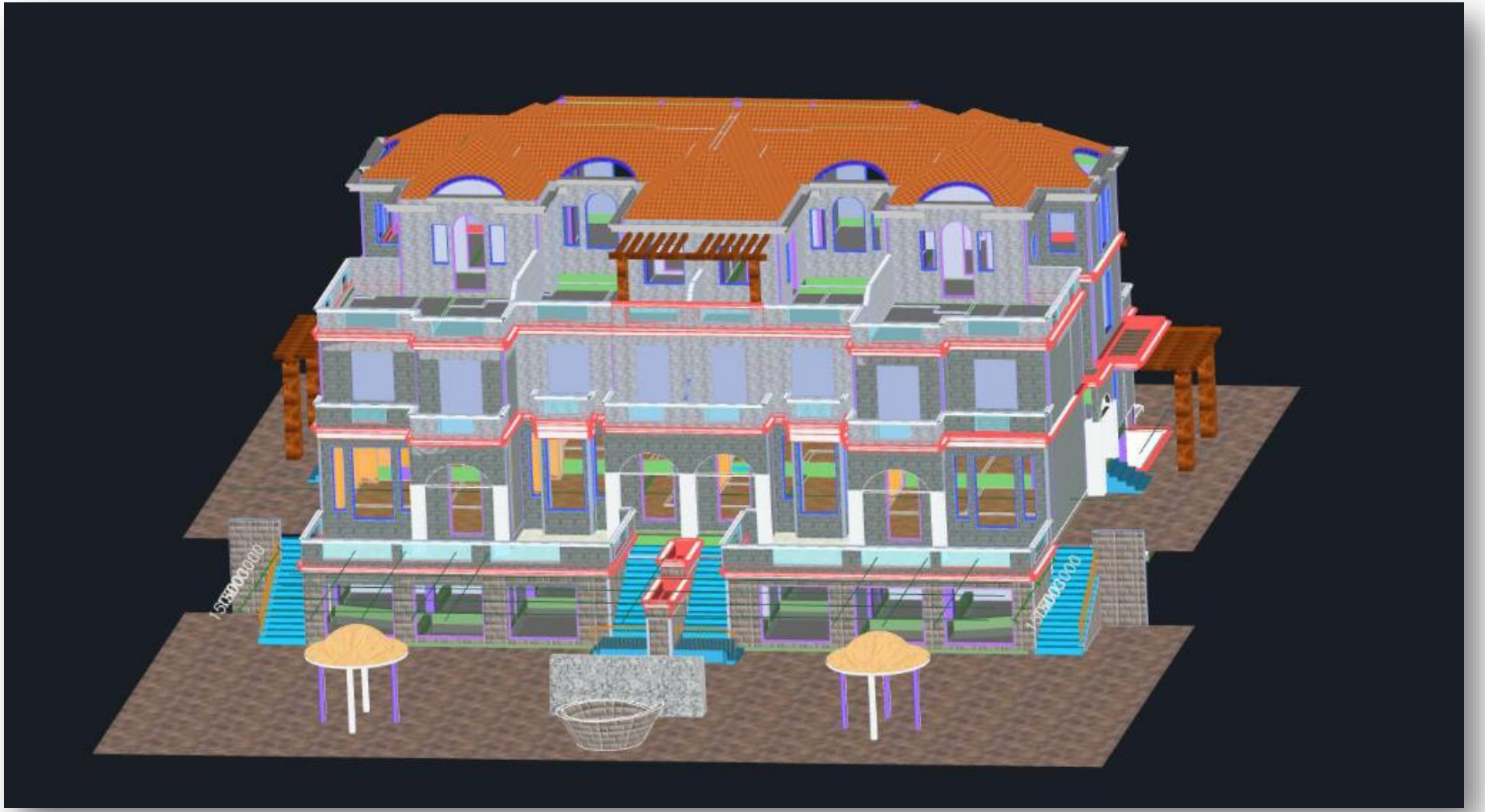




5.7 Recommended Flow for Finishes

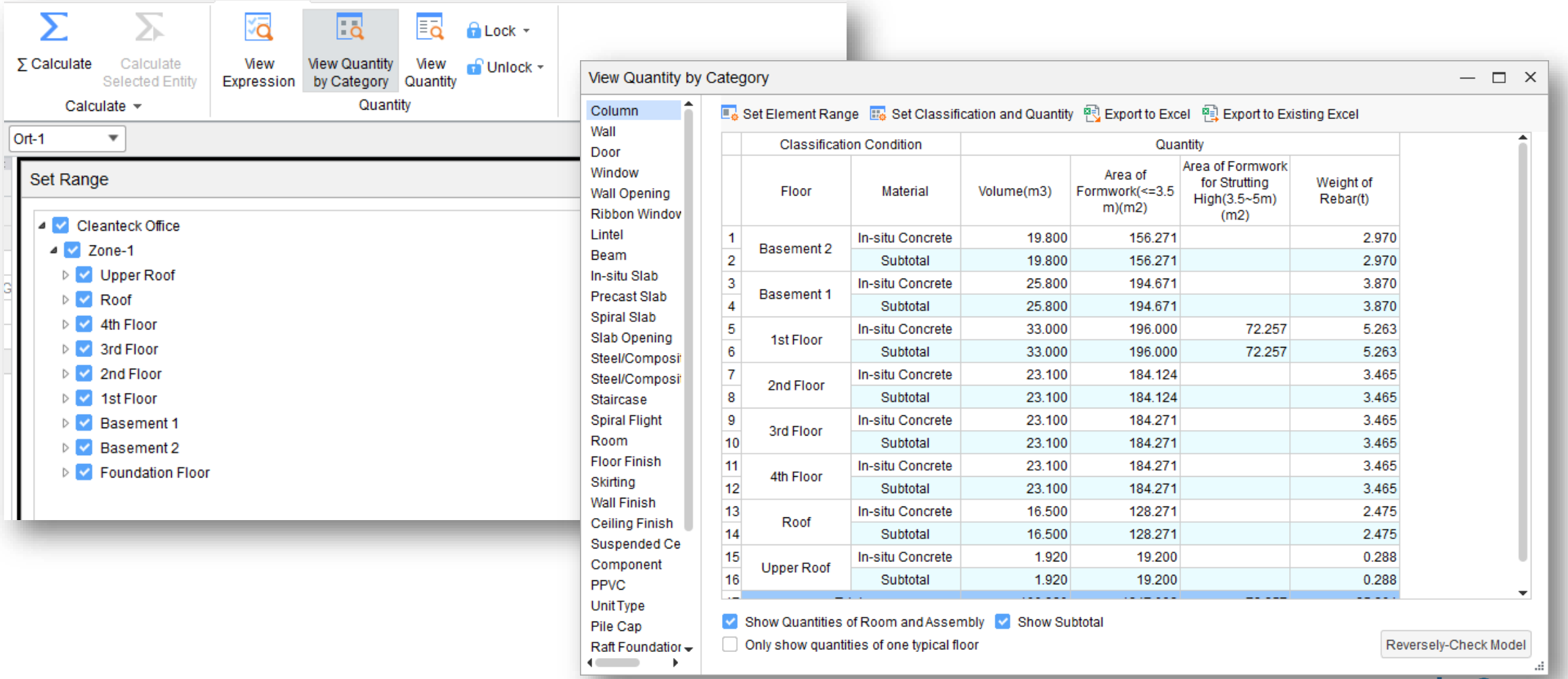


5.7 Finishes Material Texture



6.0 Report

View Quantity by Category

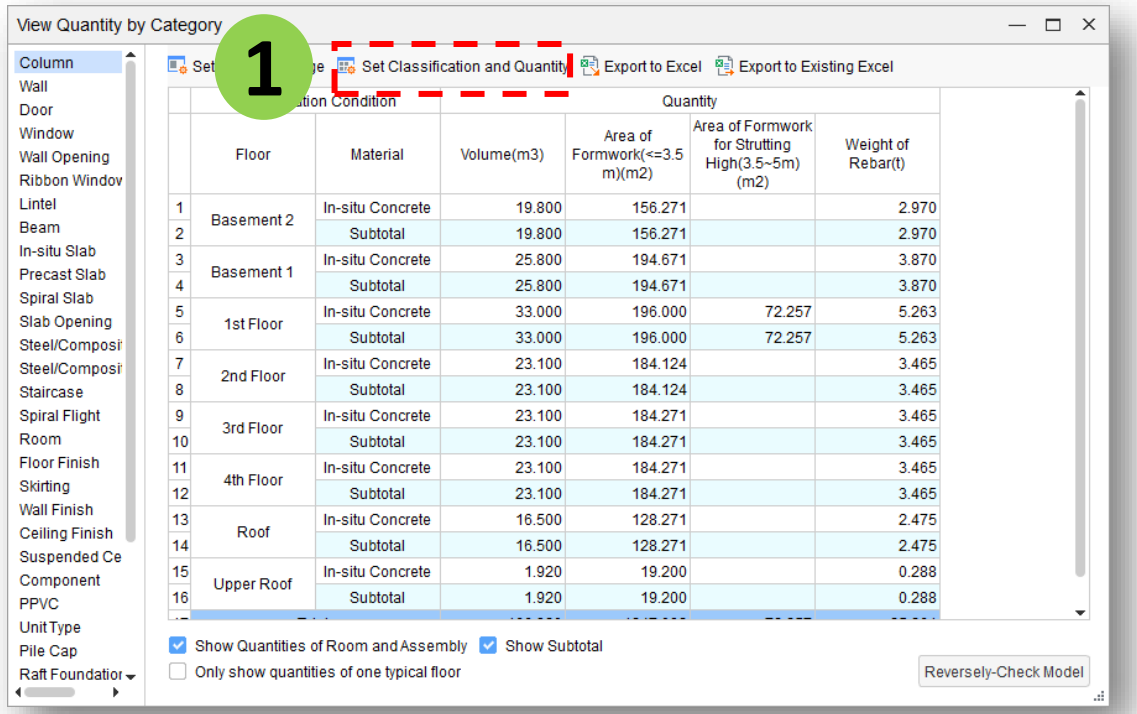


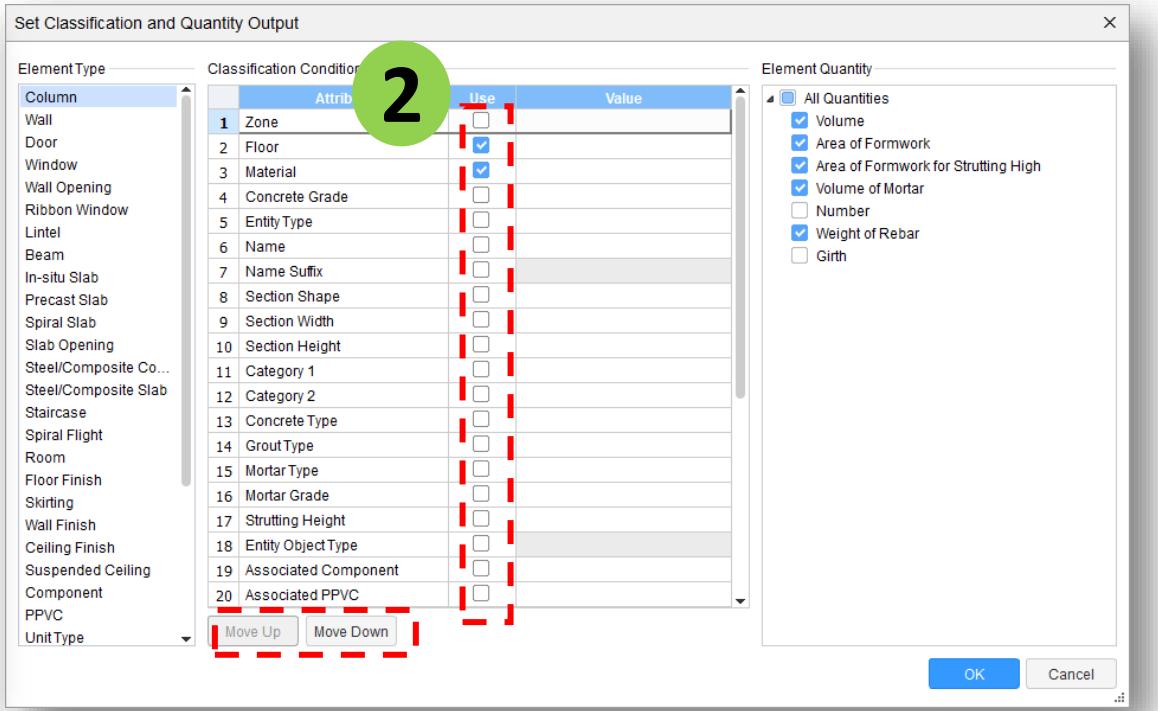
	Classification Condition		Quantity			
	Floor	Material	Volume(m3)	Area of Formwork(<=3.5 m)(m2)	Area of Formwork for Strutting High(3.5~5m) (m2)	Weight of Rebar(t)
1	Basement 2	In-situ Concrete	19.800	156.271		2.970
2		Subtotal	19.800	156.271		2.970
3	Basement 1	In-situ Concrete	25.800	194.671		3.870
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

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



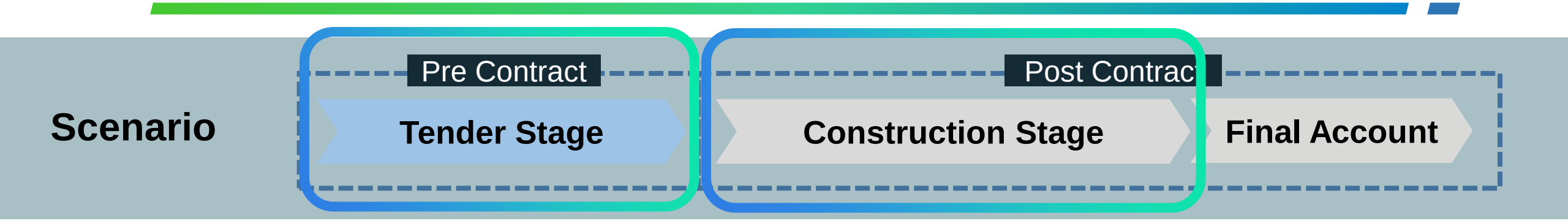


cubiCost by Glodon

Area Type

Revision

What problems does Revision solve?



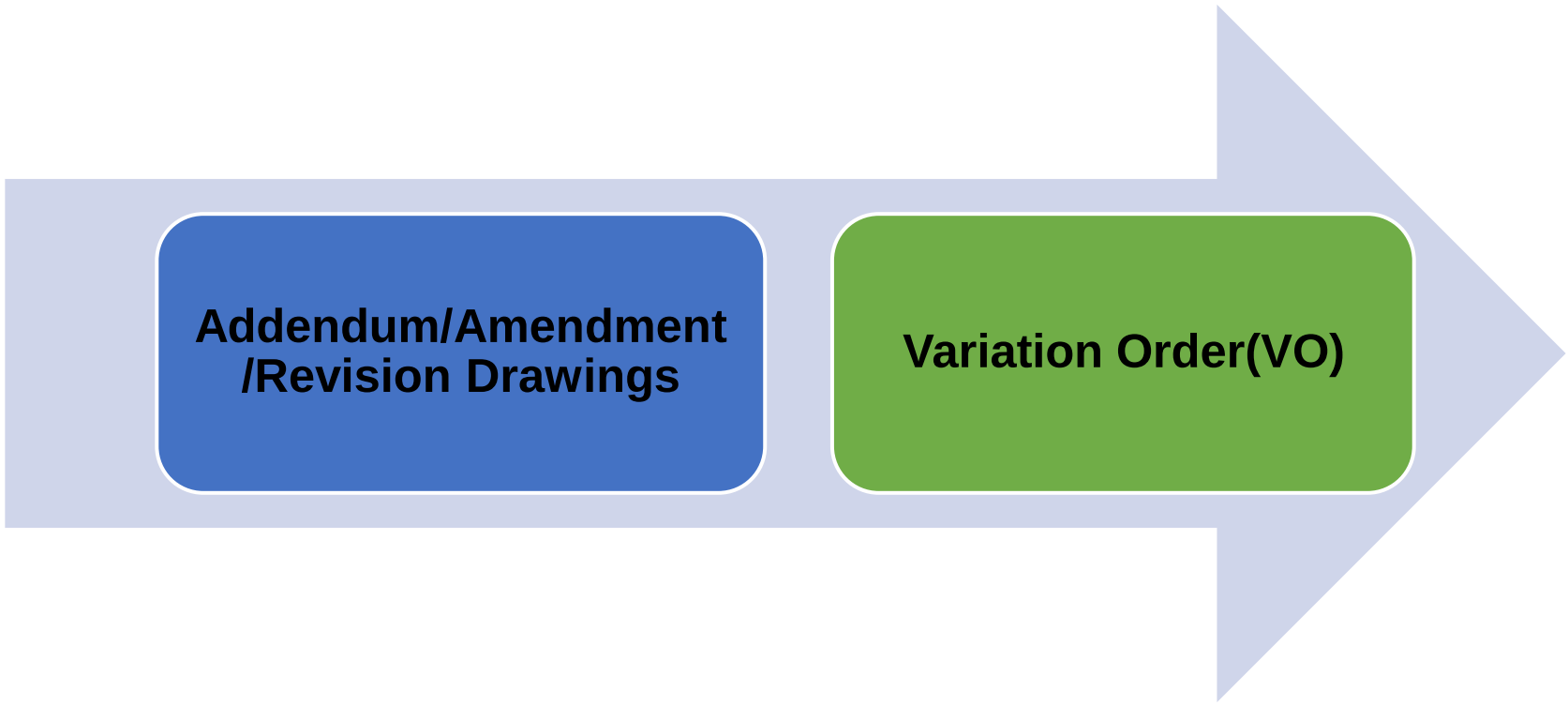
Design / Tender stage

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.

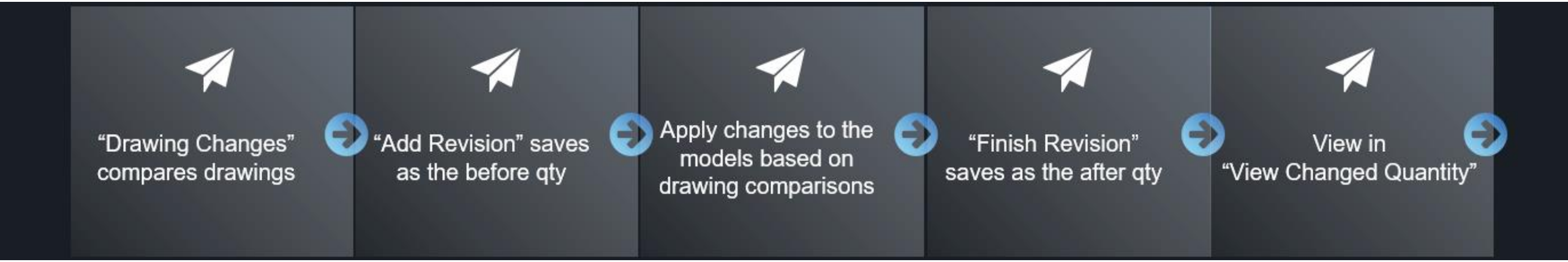
Construction VOs

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.

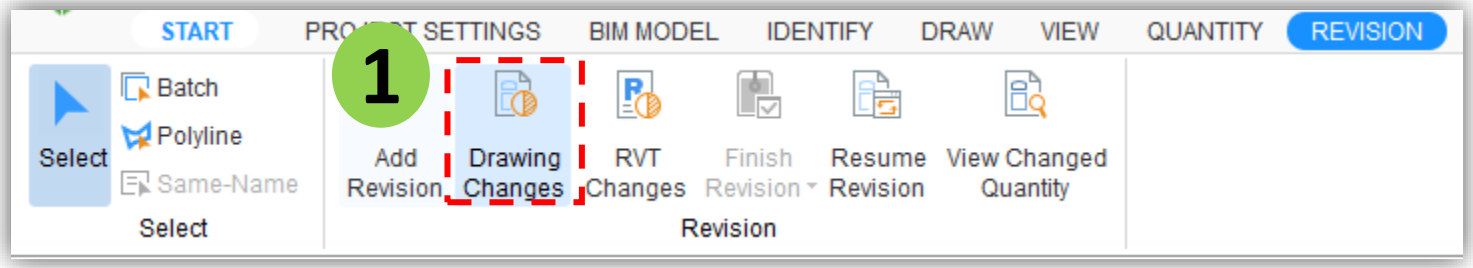
Helps you to update your revision models and calculate for the changes with auto comparison for drawings.

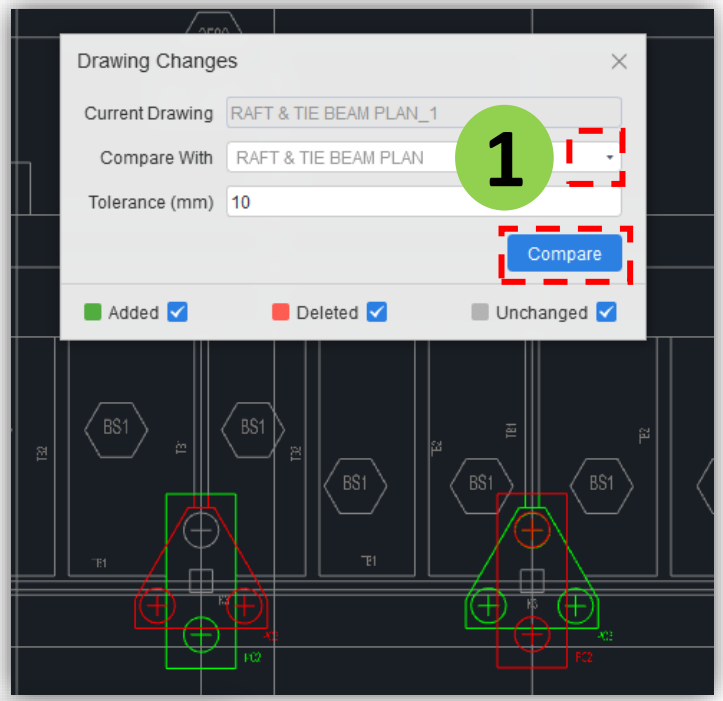

Addendum/Amendment /Revision Drawings
Variation Order(VO)

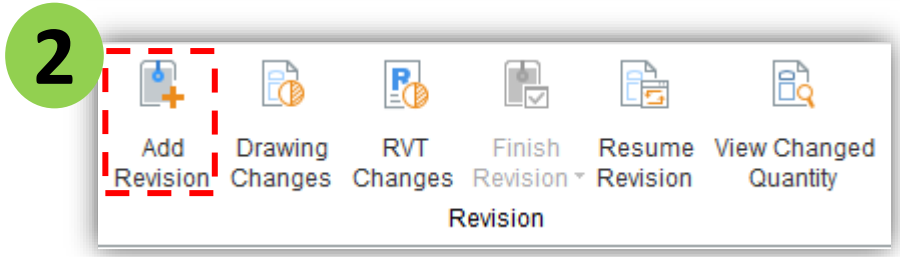
Revision Workflow

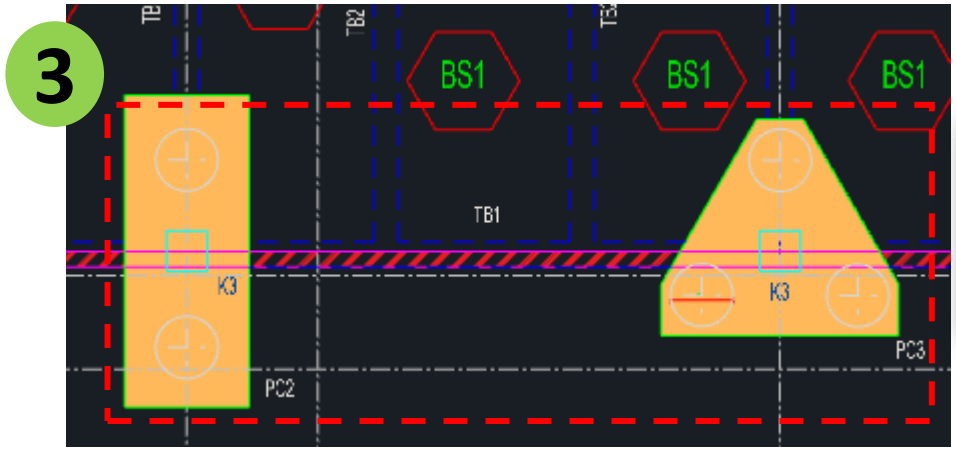


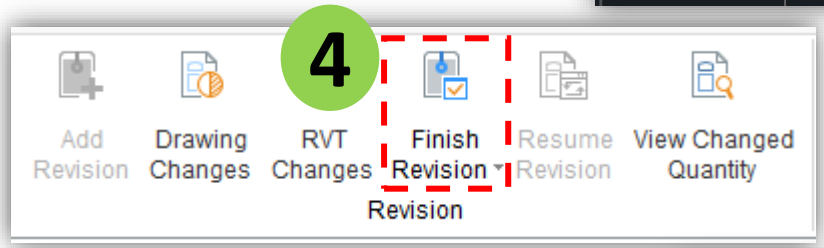
cubiCost®
Make Everything Count

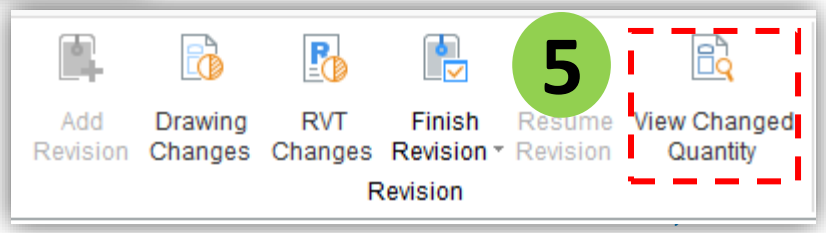












Apply changes to the models

Area Type

Segmentation

What problems does Segmentation solve?

Scenario

Pre Contract: **Tender Stage**

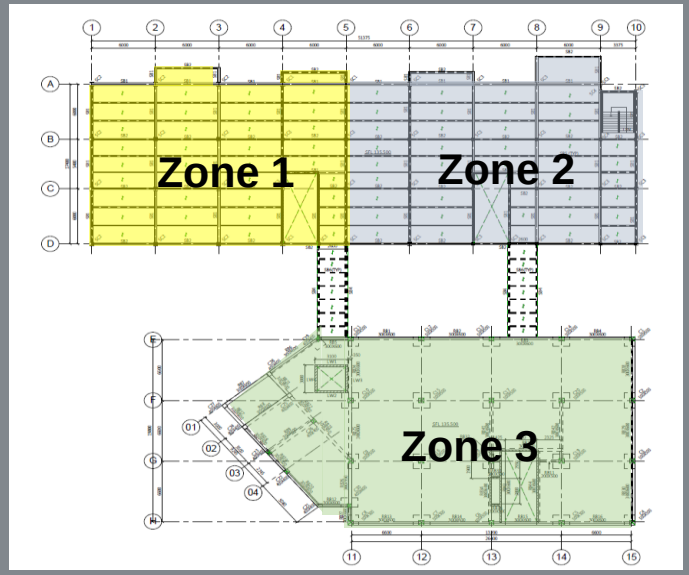
Post Contract: **Construction Stage** → **Final Account**

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

Pre Contract

Tender Stage

Post Contract

Construction Stage

Final Account

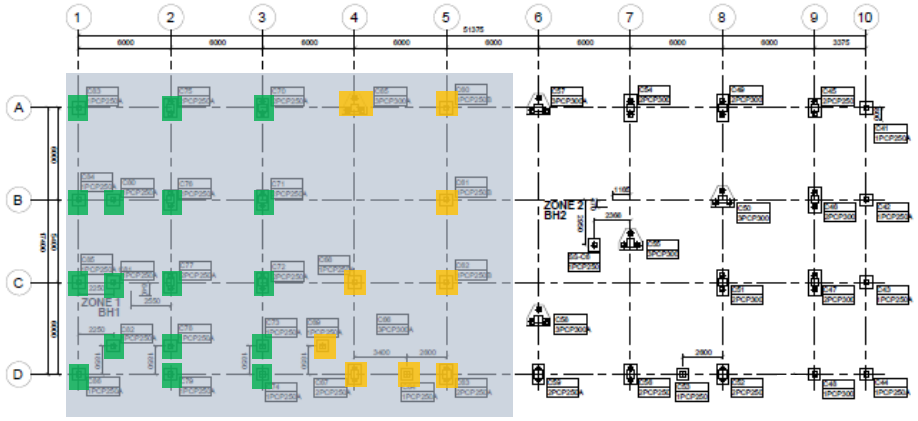
Progress Claim

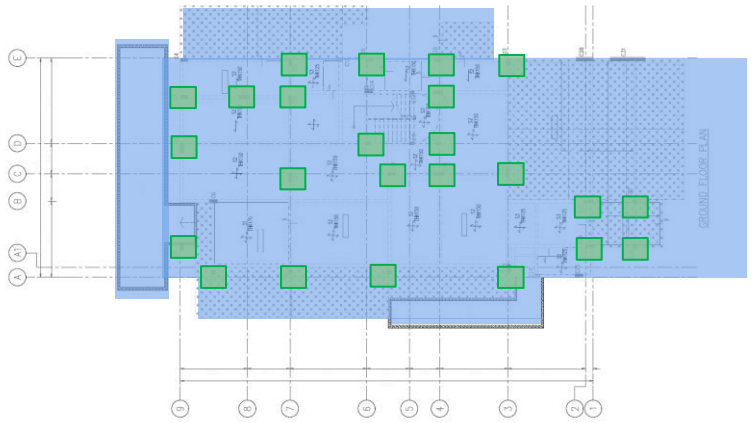
In the construction stage, the progress claim BQ is established based on the actual work done of each interim, which means only the quantities of some parts of the model need to be extracted.

Beam & Slab casted

Pile cap concrete

Pile cap fwk & rebar





Wall Completed

Slab Completed

Column Completed

Beam Completed

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

Create "Segmentation" in Element List

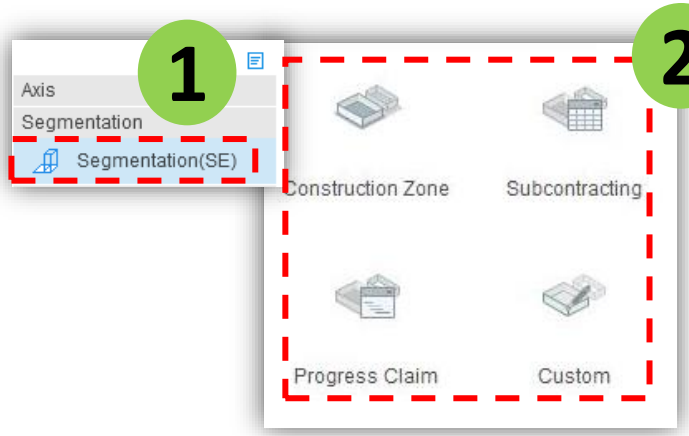
Set up "Calculation Scope"

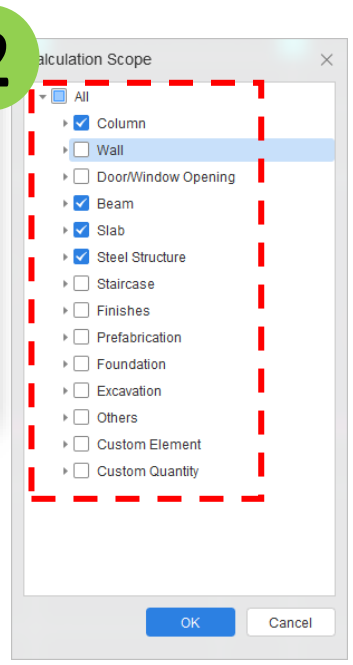
Draw "Segmentation" on the model

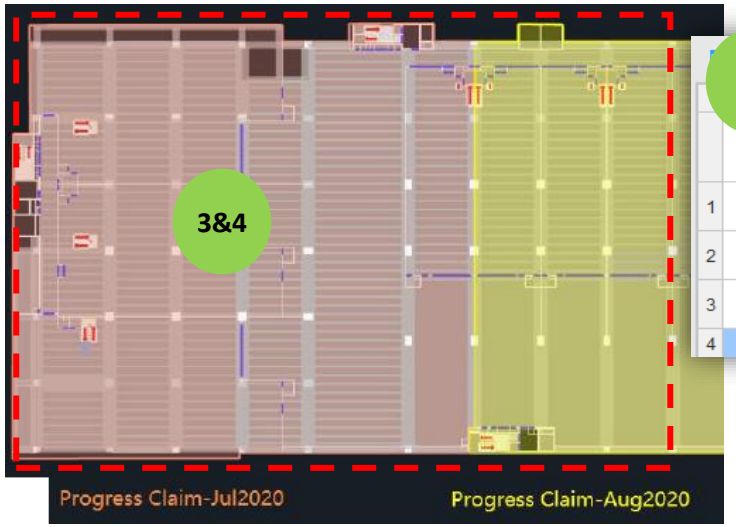
Adjust entities by "Set Associated Segmentation"

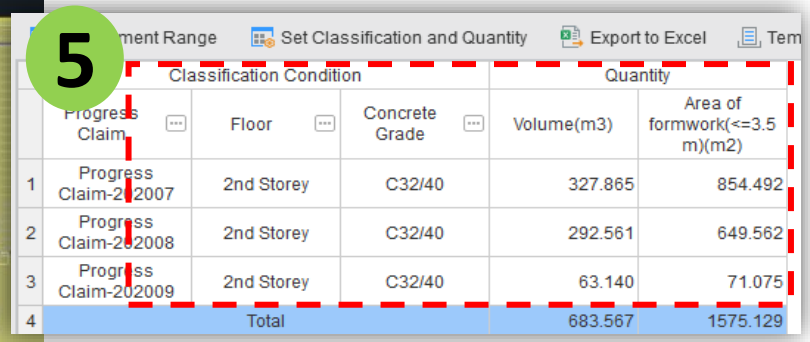
** If needs*

View in "View Quantity" View in "View Expression"



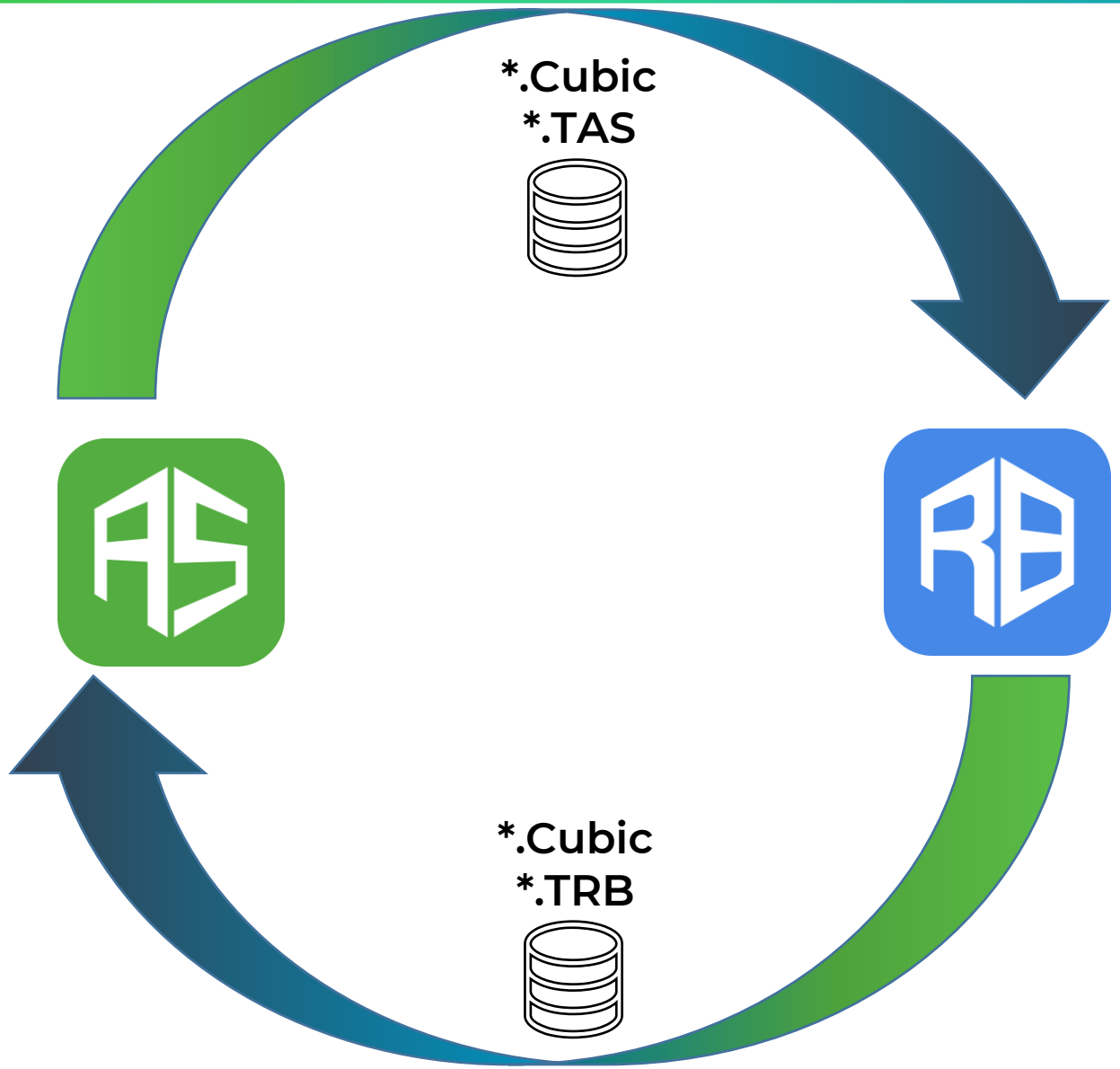


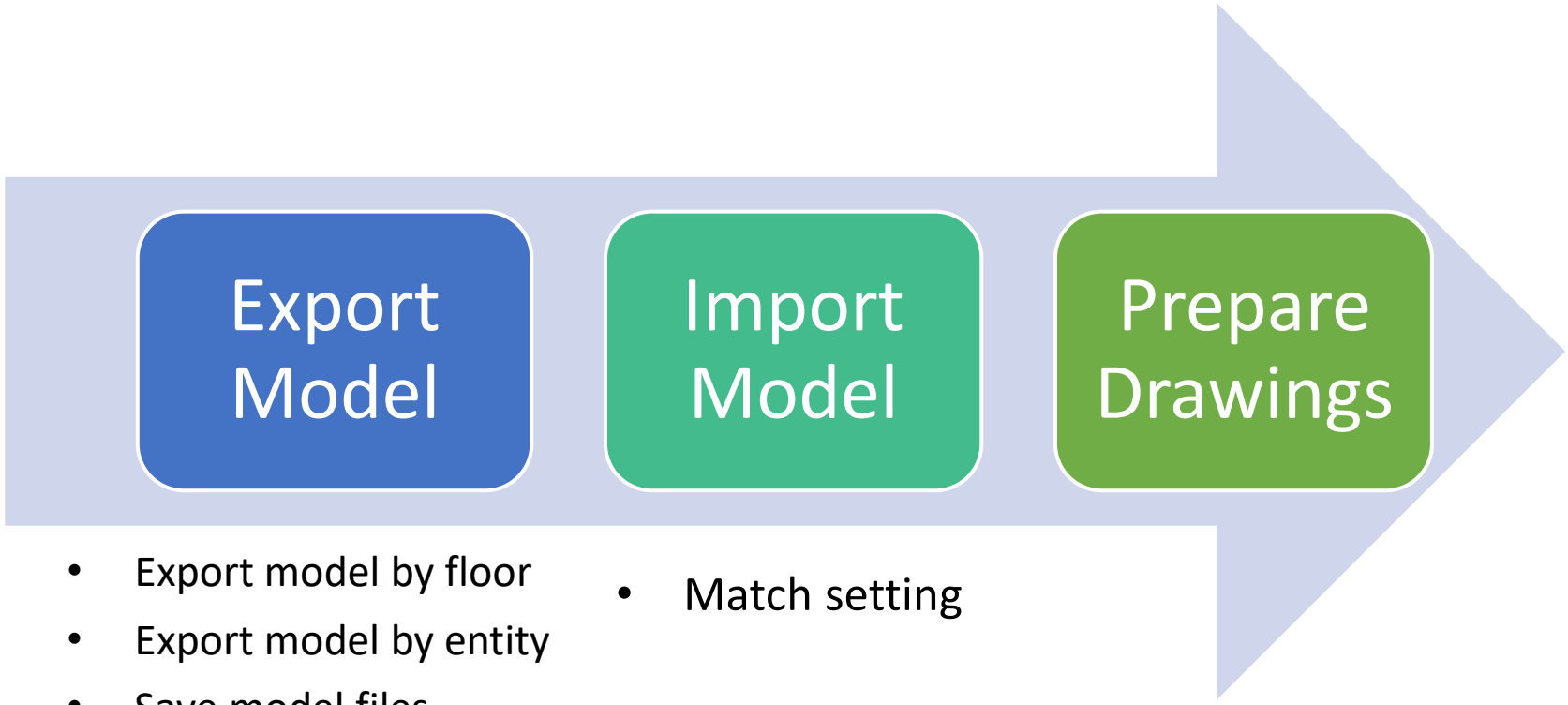




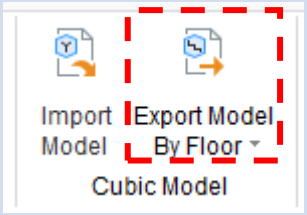
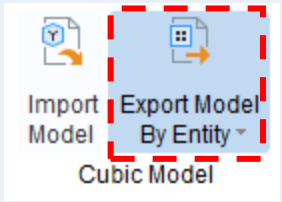
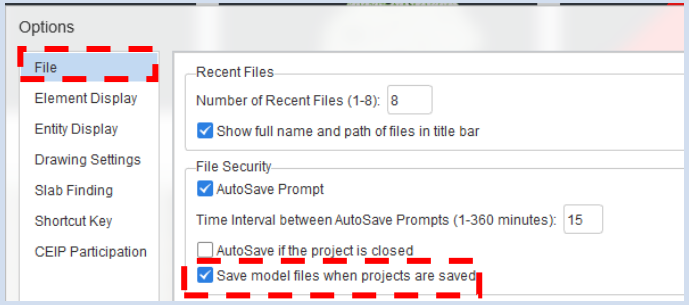
	Classification Condition			Quantity	
	Progress Claim	Floor	Concrete Grade	Volume(m3)	Area of formwork(<=3.5 m)(m2)
1	Progress Claim-202007	2nd Storey	C32/40	327.865	854.492
2	Progress Claim-202008	2nd Storey	C32/40	292.561	649.562
3	Progress Claim-202009	2nd Storey	C32/40	63.140	71.075
4	Total			683.567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

Model Sharing



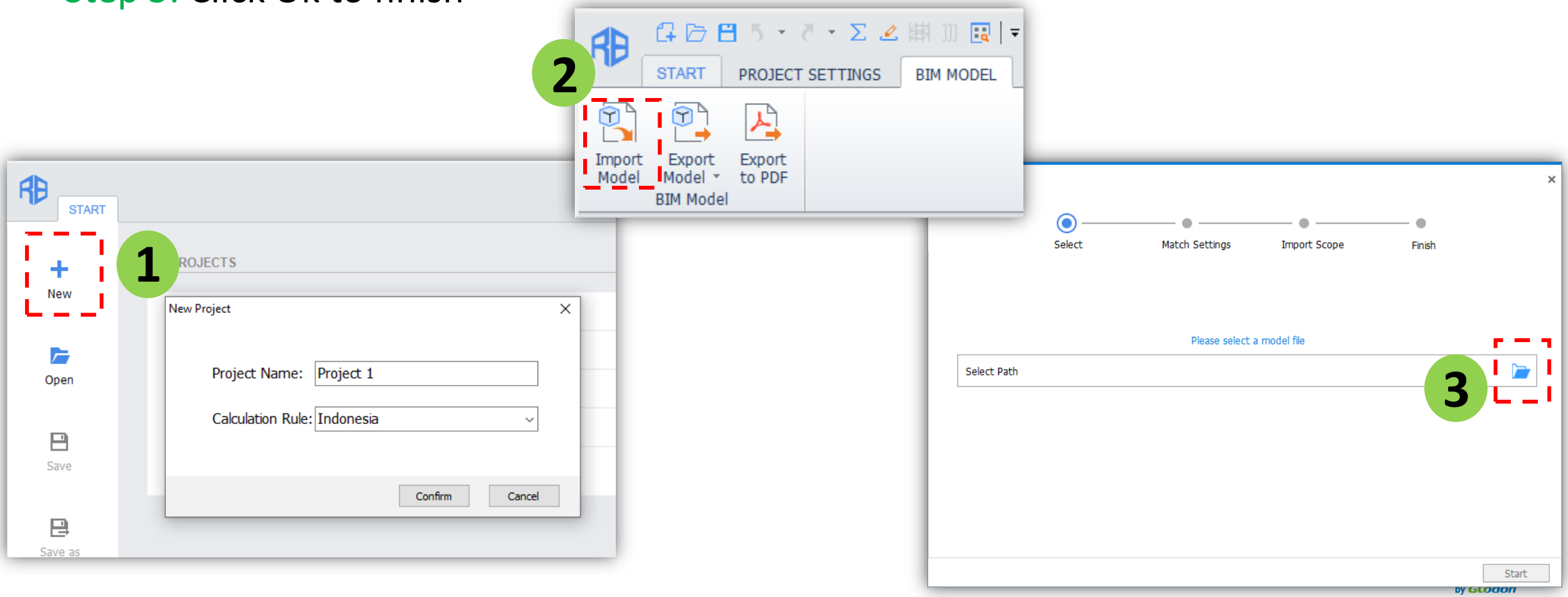

Export Model
Import Model
Prepare Drawings
• Export model by floor
• Export model by entity
• Save model files
• Match setting

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

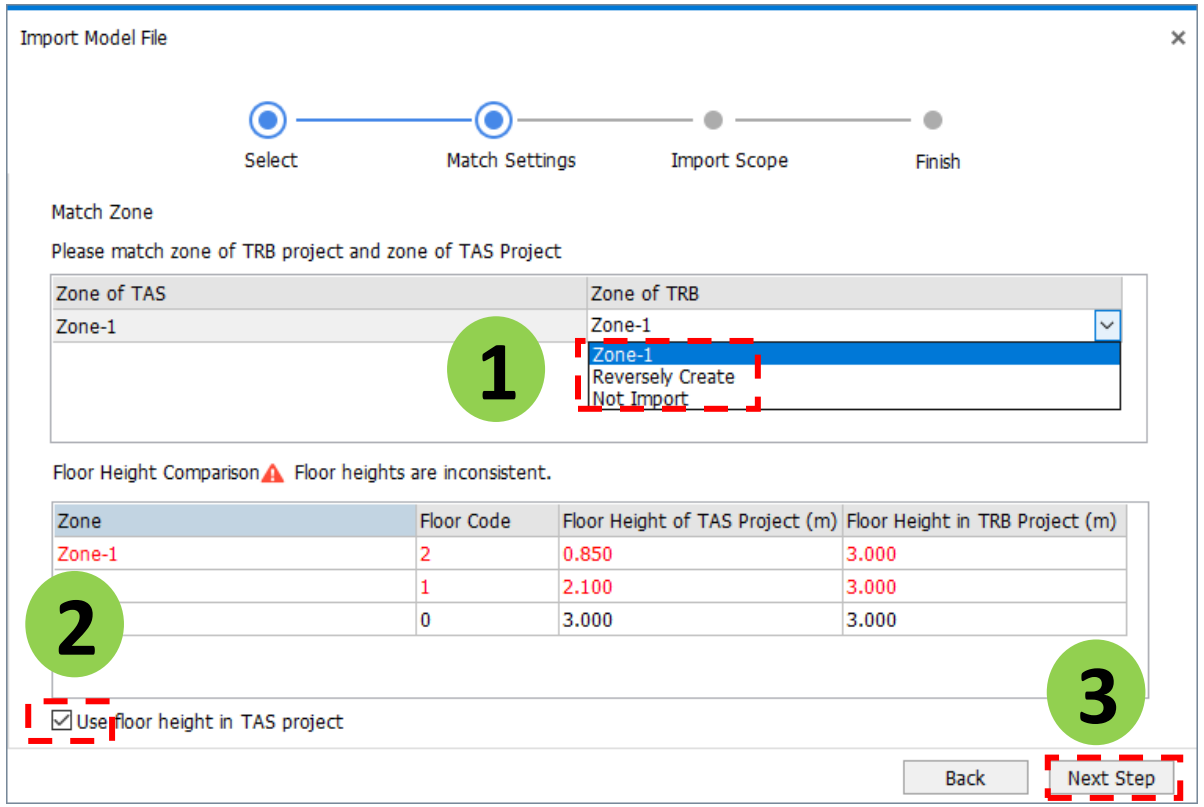
Import Model

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



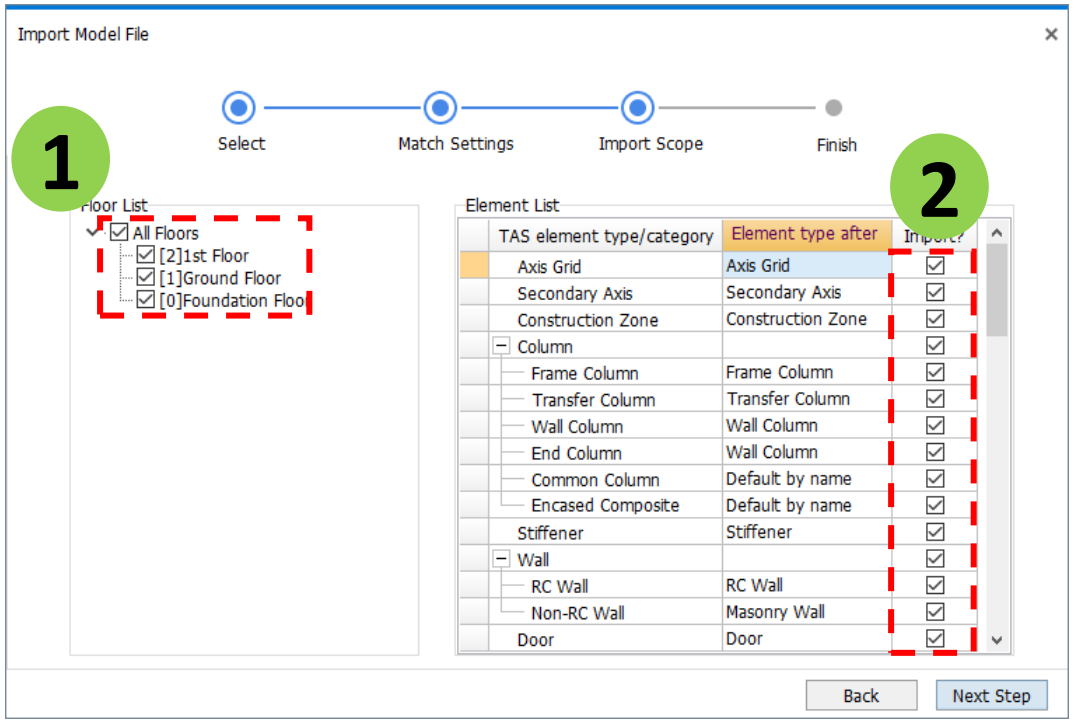
Import Model-Match Settings

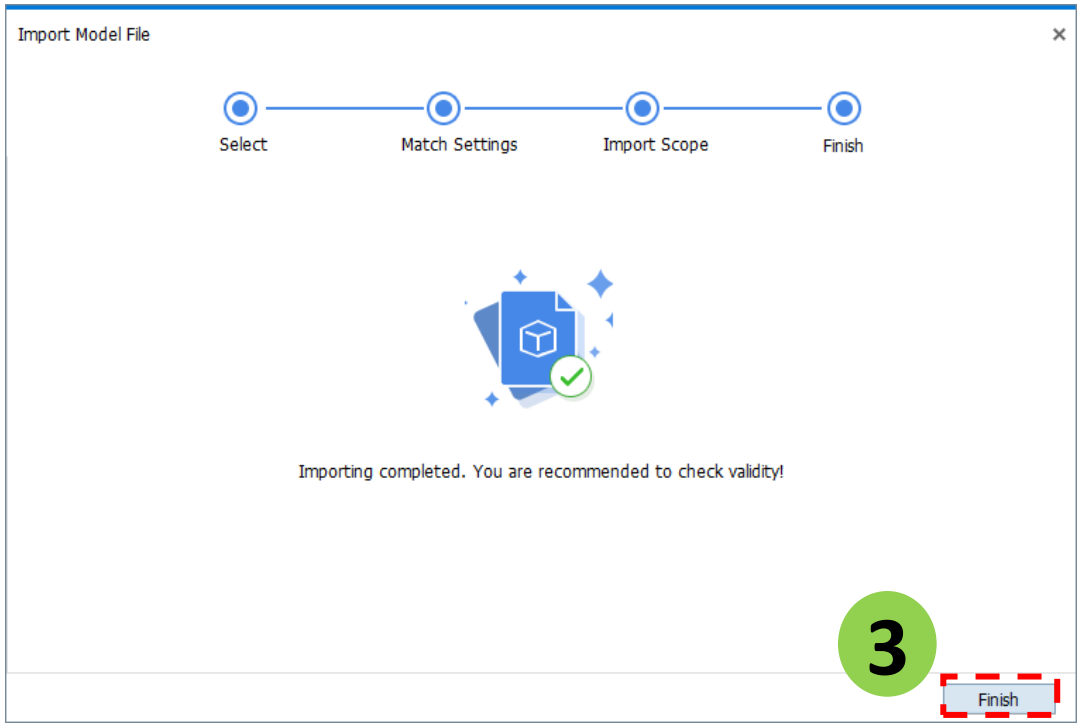
- Step 1: Use zone from imported project, or Maintain current project's zone and create new zone from imported project
- Step 2: Tick [Use floor height in TAS project];
- Step 3: Click Next Step



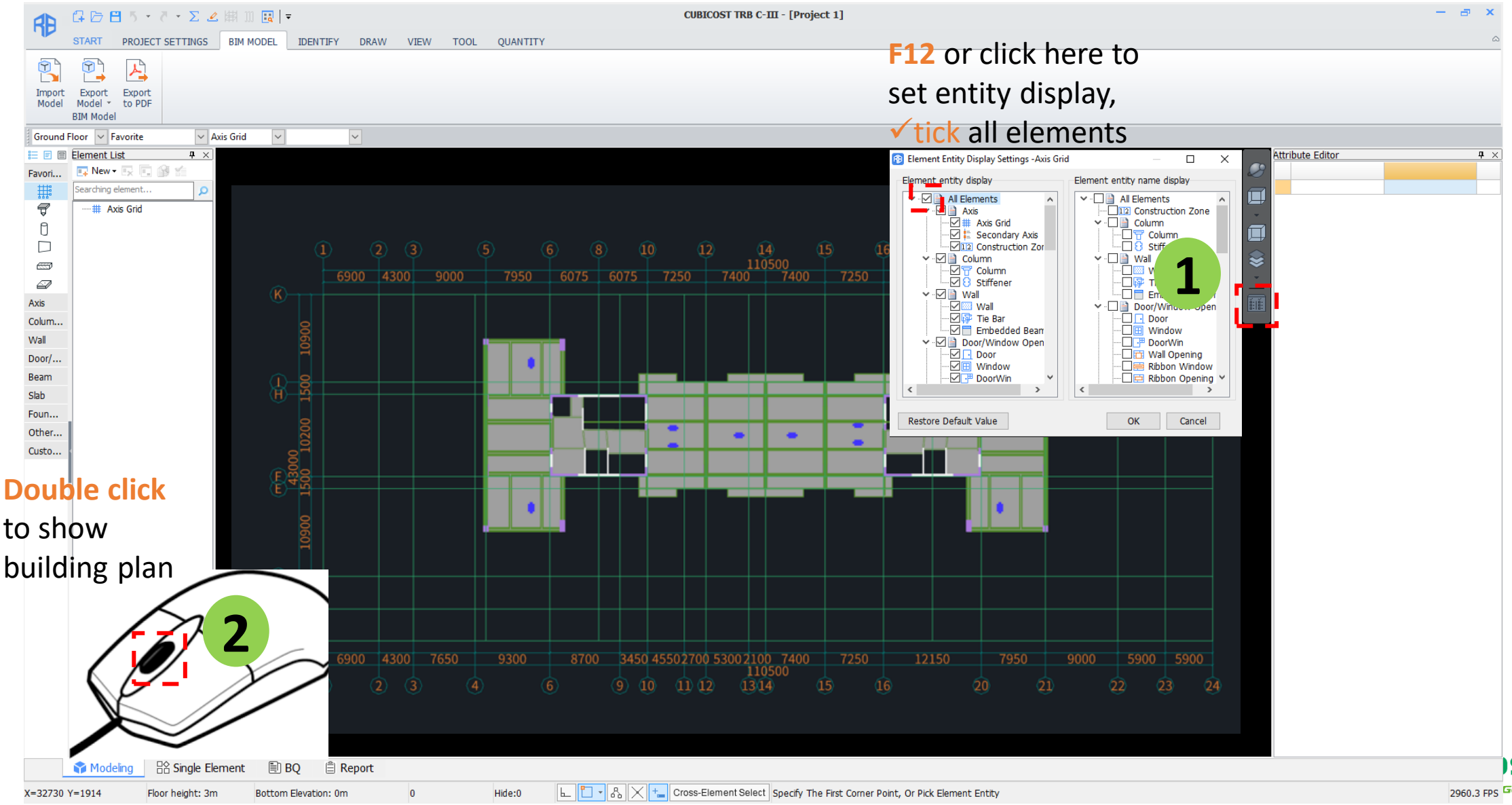
Import Model-Match Settings

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



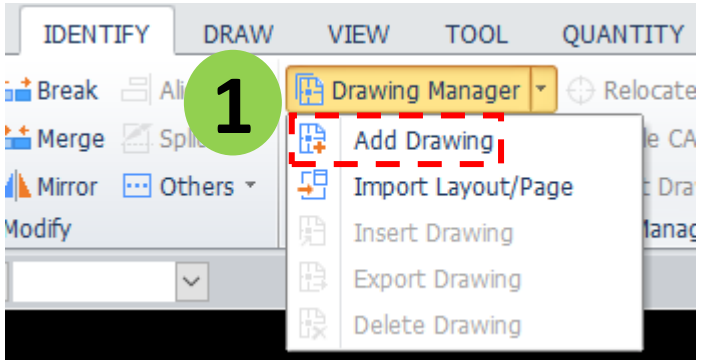


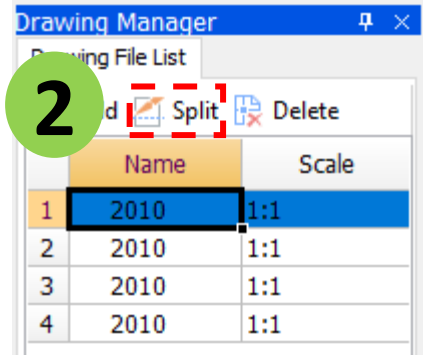
Import Model-Show models

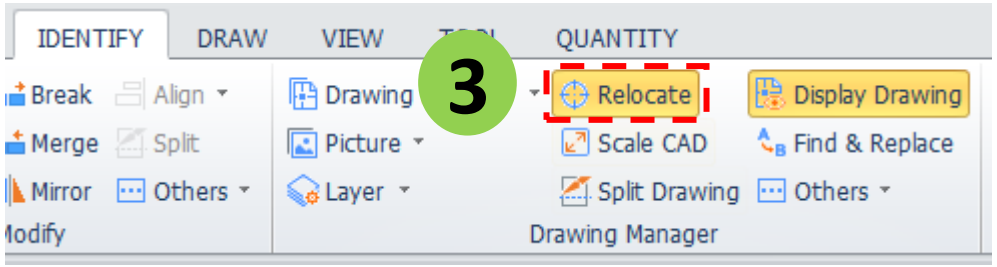


Prepare Drawings (Add , Split & RelocateDrawings)

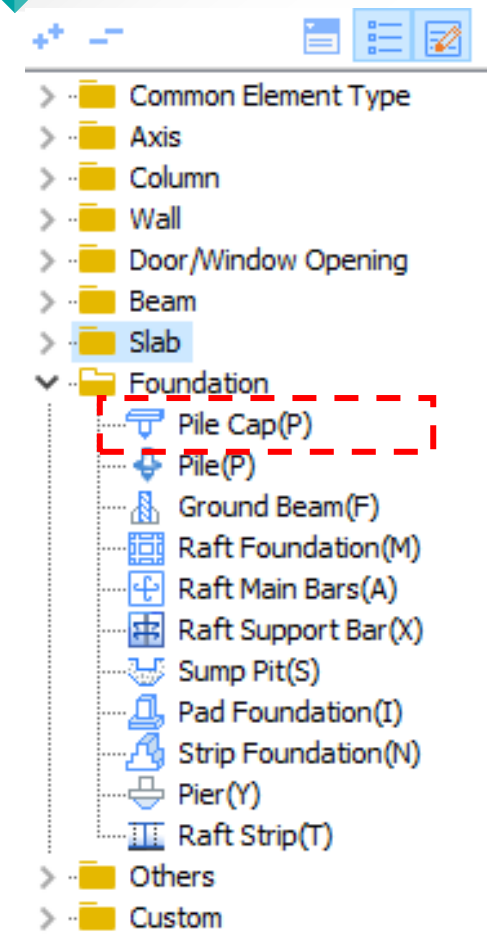
- Step 1: Tab {IDENTIFY},Select [Add Drawing] importing;
- Step 2: [Split] drawing;
- Step 3: [Relocate] drawing;



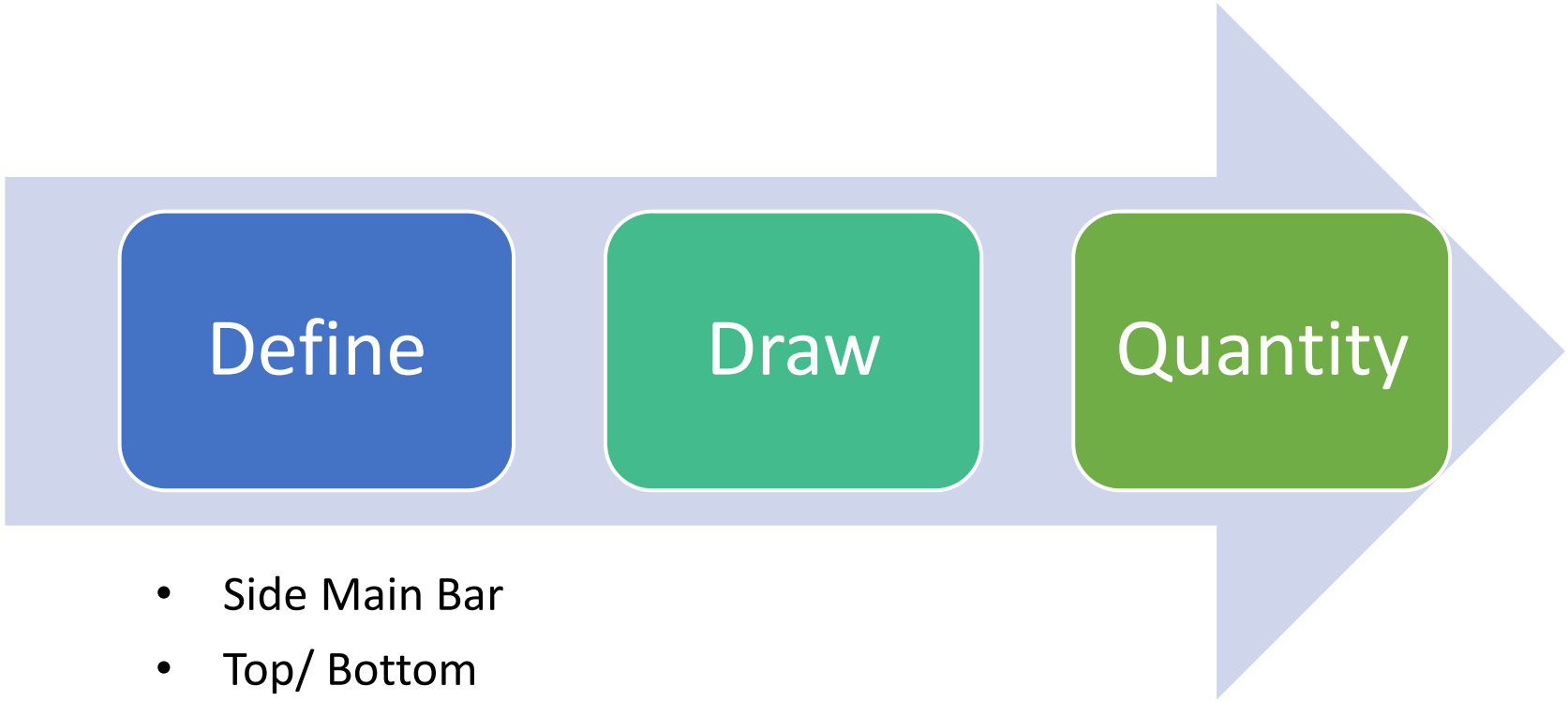




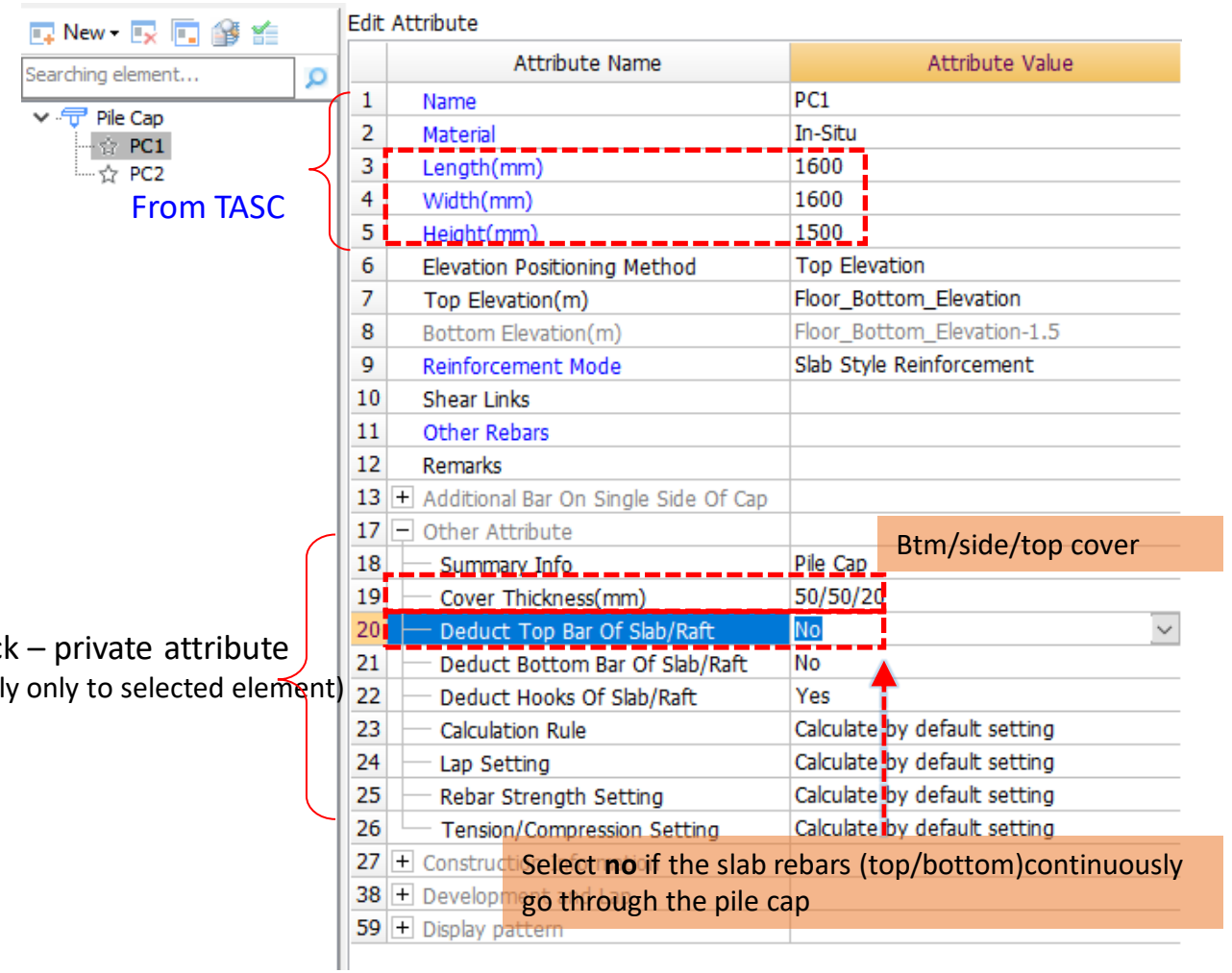
Point Type

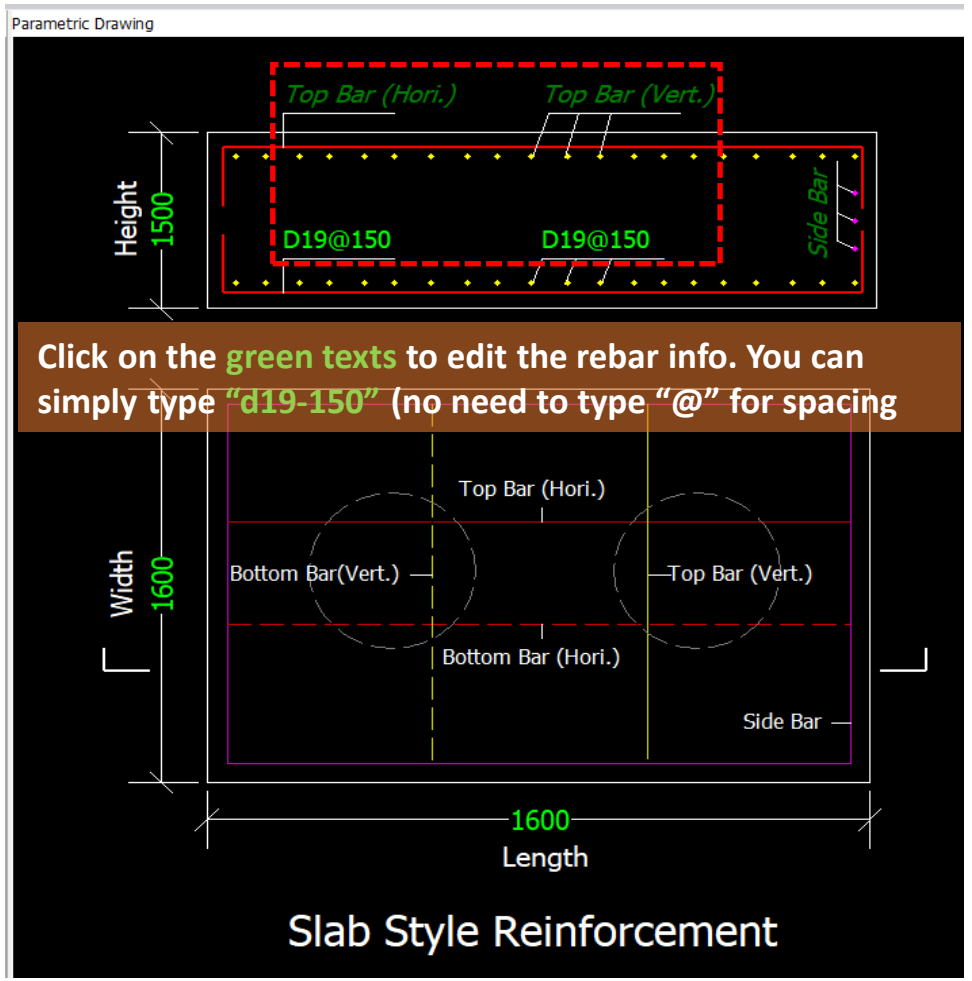


Pile Cap

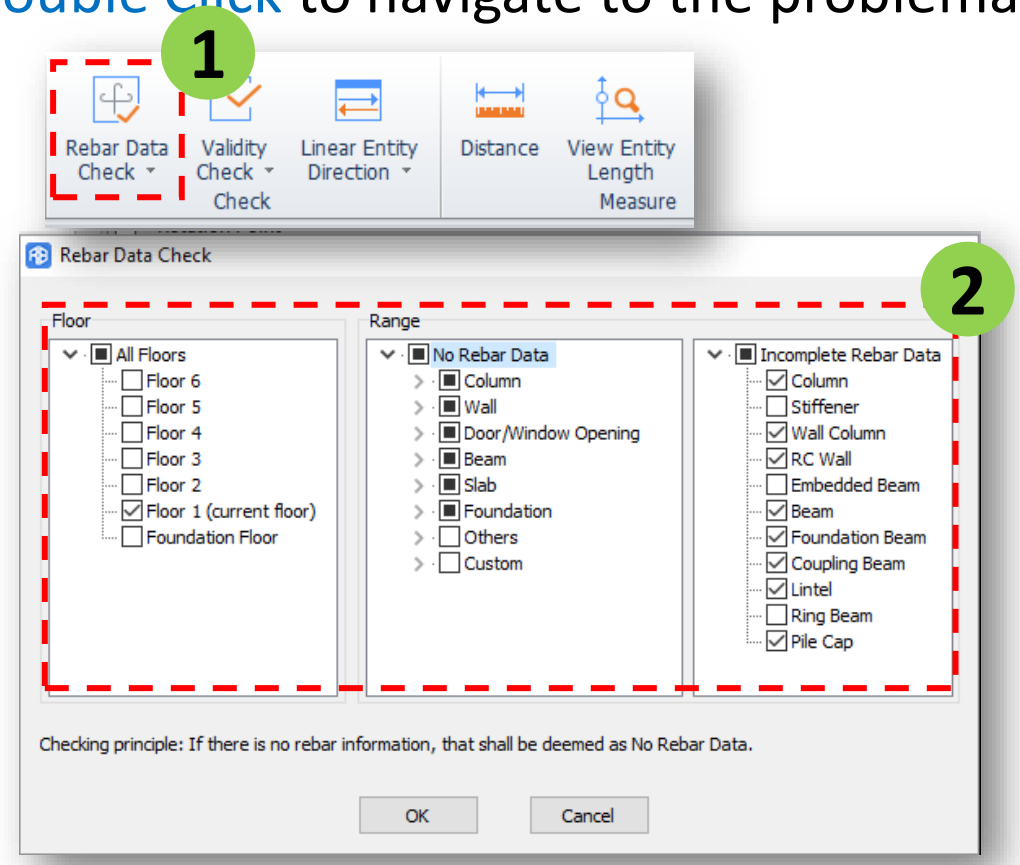


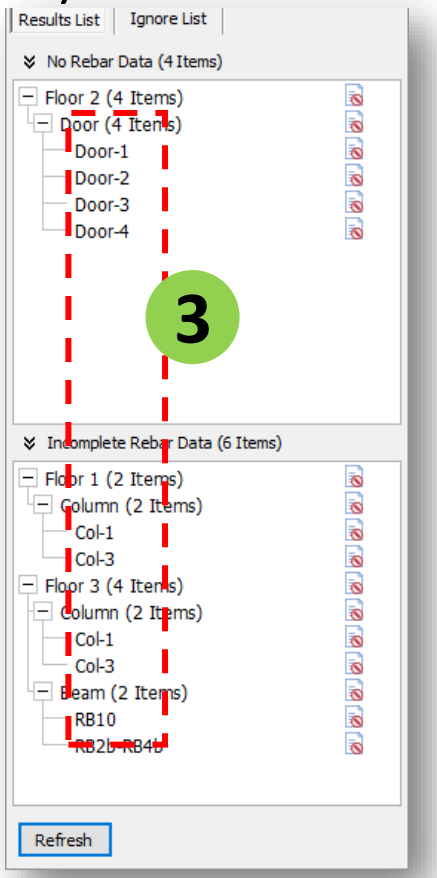
- Side Main Bar
- Top/ Bottom


New
Searching element...
Pile Cap
PC1
PC2
From TASC
Edit Attribute
Attribute Name
Attribute Value
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
38
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)


Parametric Drawing
Top Bar (Hori.)
Top Bar (Vert.)
Height
1500
D19@150
D19@150
Side Bar
Click on the green texts to edit the rebar info. You can simply type "d19-150" (no need to type "@" for spacing
Top Bar (Hori.)
Width
1600
Bottom Bar(Vert.)
Top Bar (Vert.)
Bottom Bar (Hori.)
Side Bar
1600
Length
Slab Style Reinforcement

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

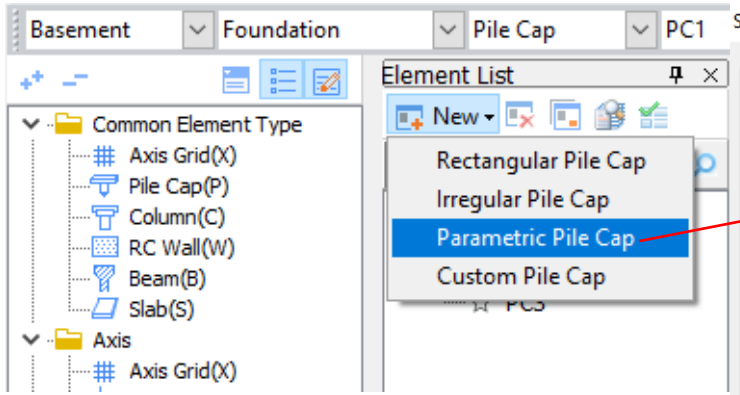


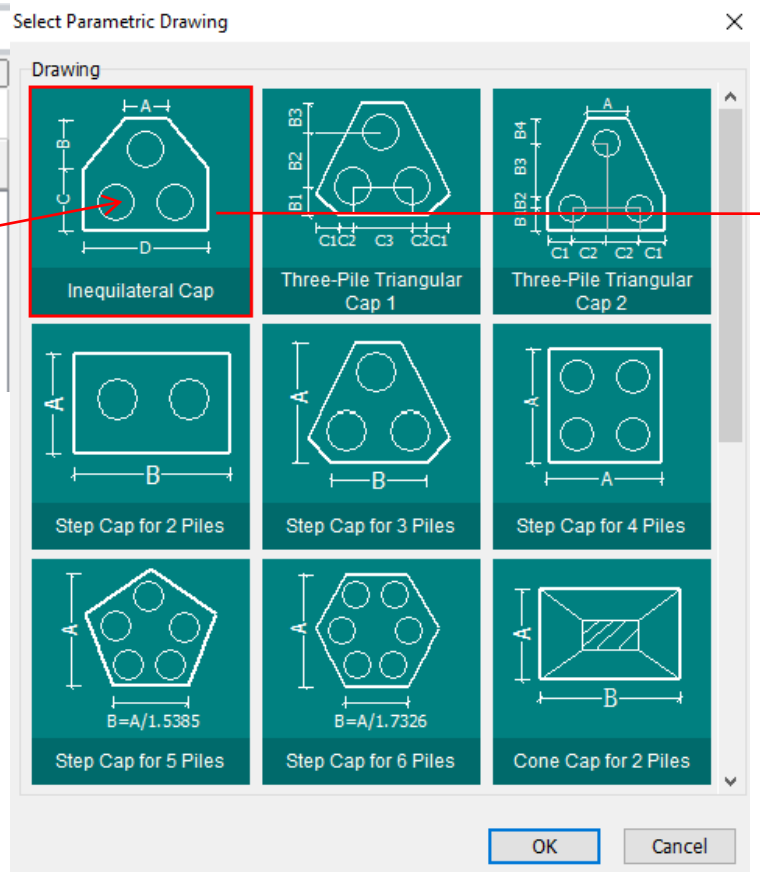


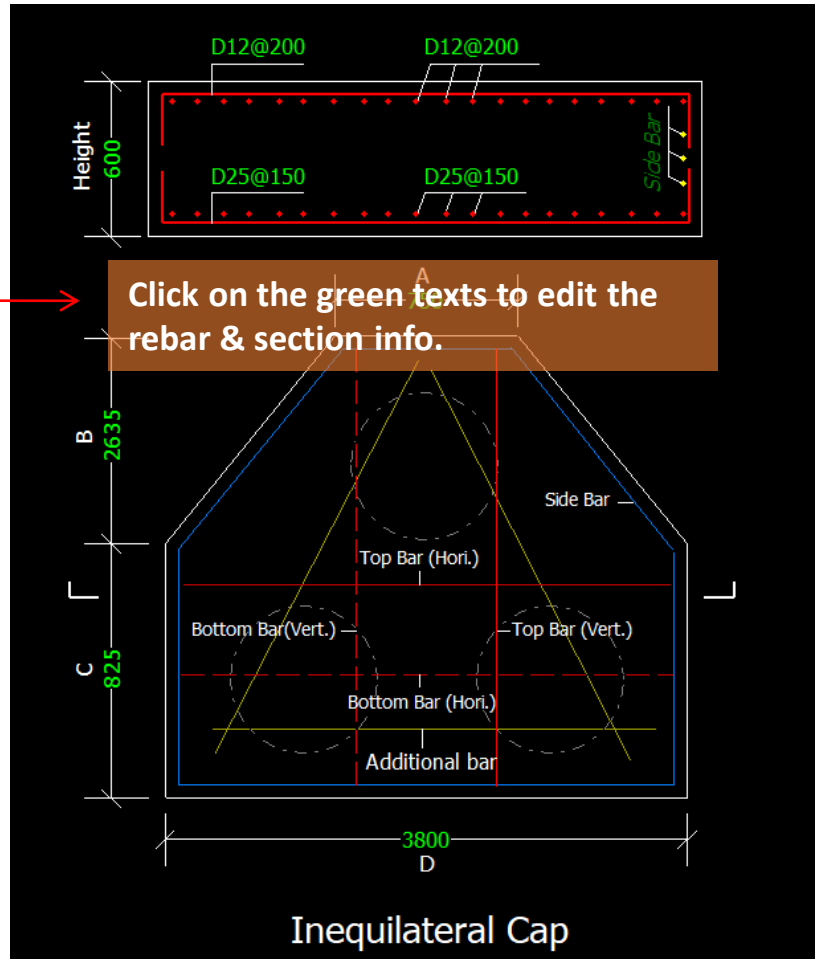
Step 1: In the pile cap element list click new → parametric pile cap

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

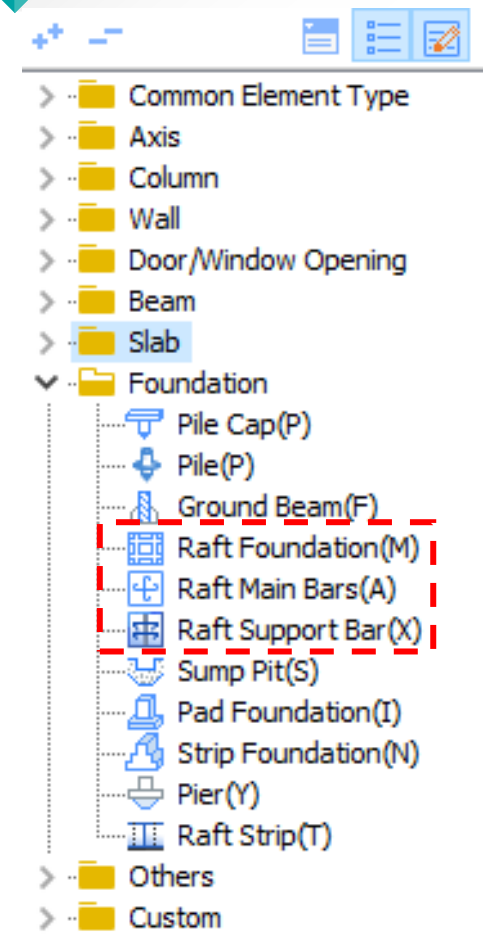
Step 1: Input the rebar & shape info in the attribute editor



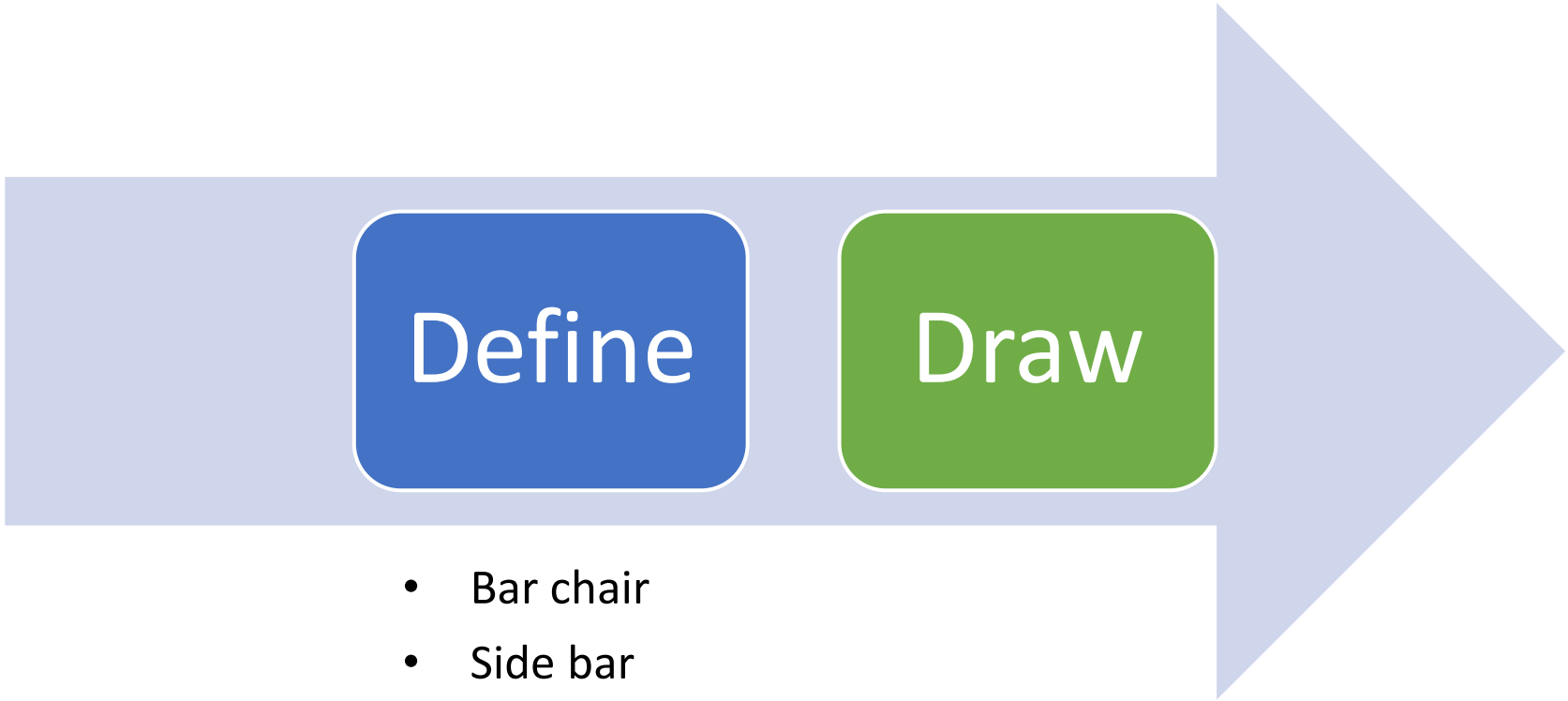




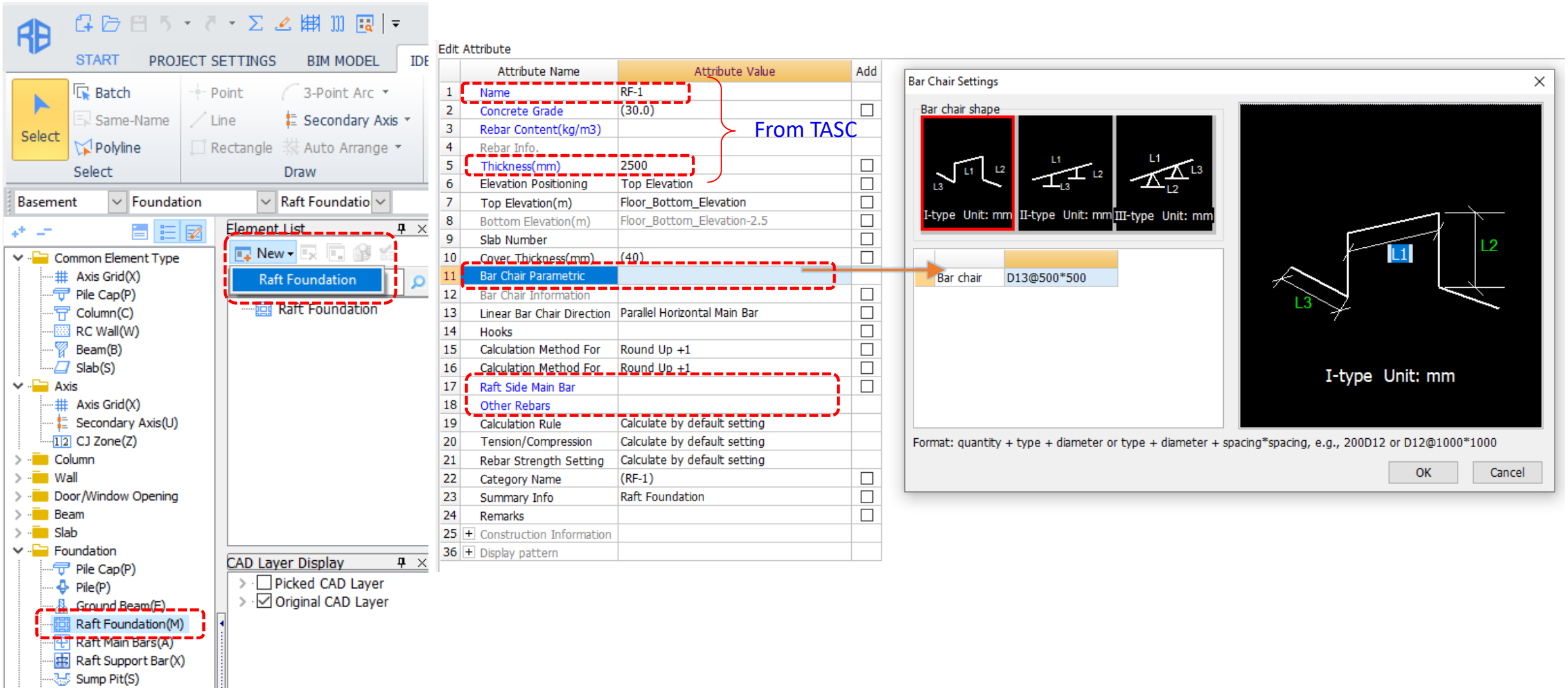
Area Type

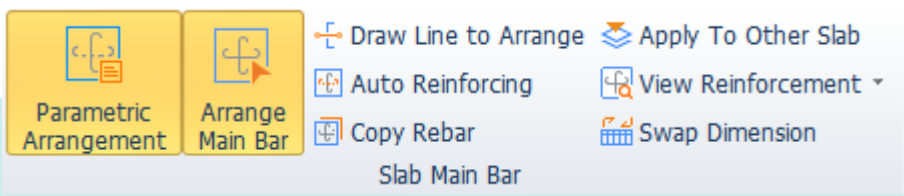


Raft Foundation



- Bar chair
- Side bar

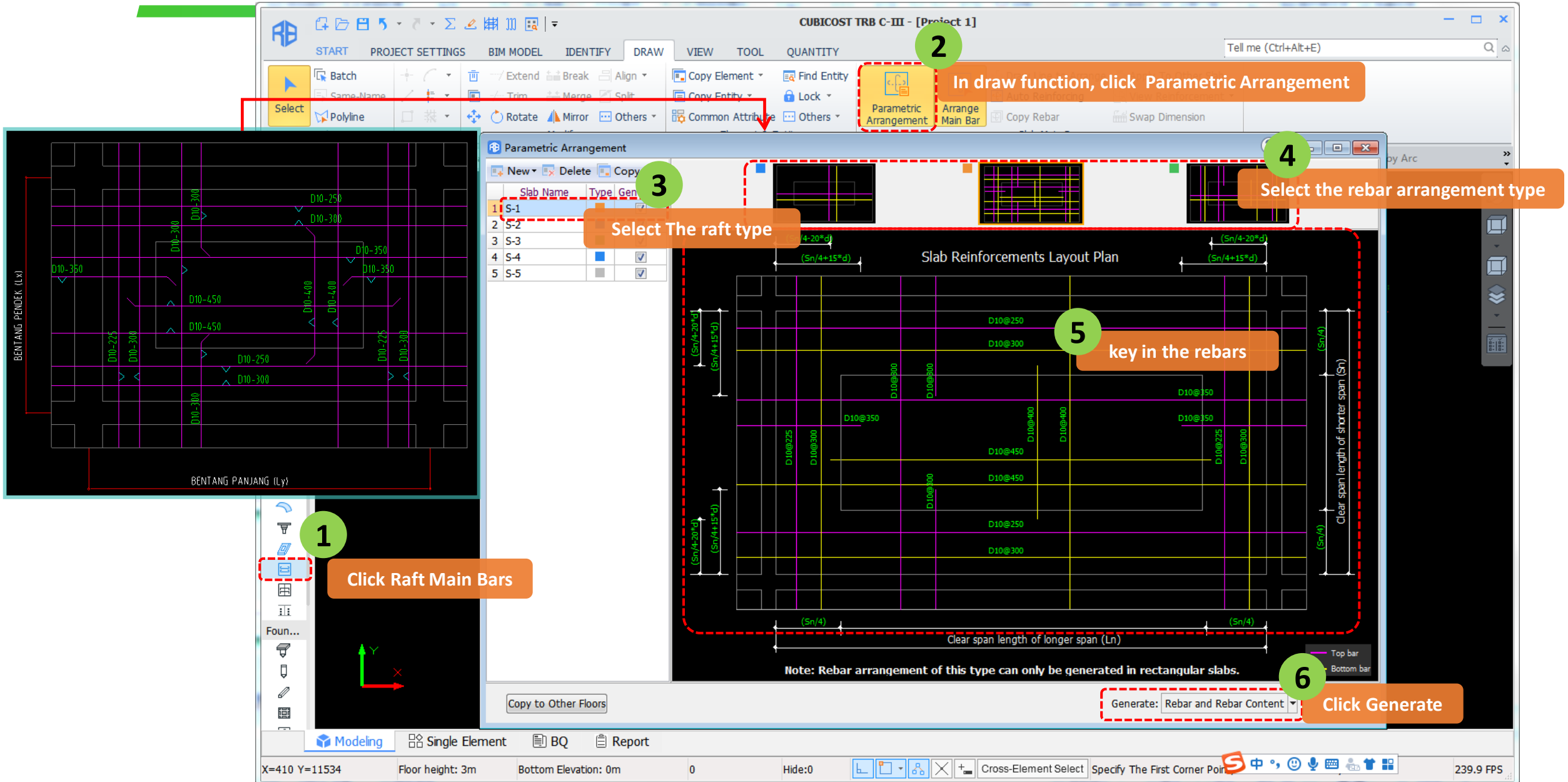

START
PROJECT SETTINGS
BIM MODEL
Select
Batch
Same-Name
Polyline
Point
Line
Rectangle
3-Point Arc
Secondary Axis
Auto Arrange
Select
Draw
Basement
Foundation
Raft Foundatio
Element List
New
Raft Foundation
Raft Foundation
Common Element Type
Axis Grid(X)
Pile Cap(P)
Column(C)
RC Wall(W)
Beam(B)
Slab(S)
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(E)
Raft Foundation(M)
Raft Main Bars(A)
Raft Support Bar(X)
Sump Pit(S)
CAD Layer Display
Picked CAD Layer
Original CAD Layer
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
Bar Chair Settings
Bar chair shape
I-type Unit: mm
II-type Unit: mm
III-type Unit: mm
Bar chair D13@500*500
L1
L2
L3
I-type Unit: mm
Format: quantity + type + diameter or type + diameter + spacing*spacing, e.g., 200D12 or D12@1000*1000
OK
Cancel

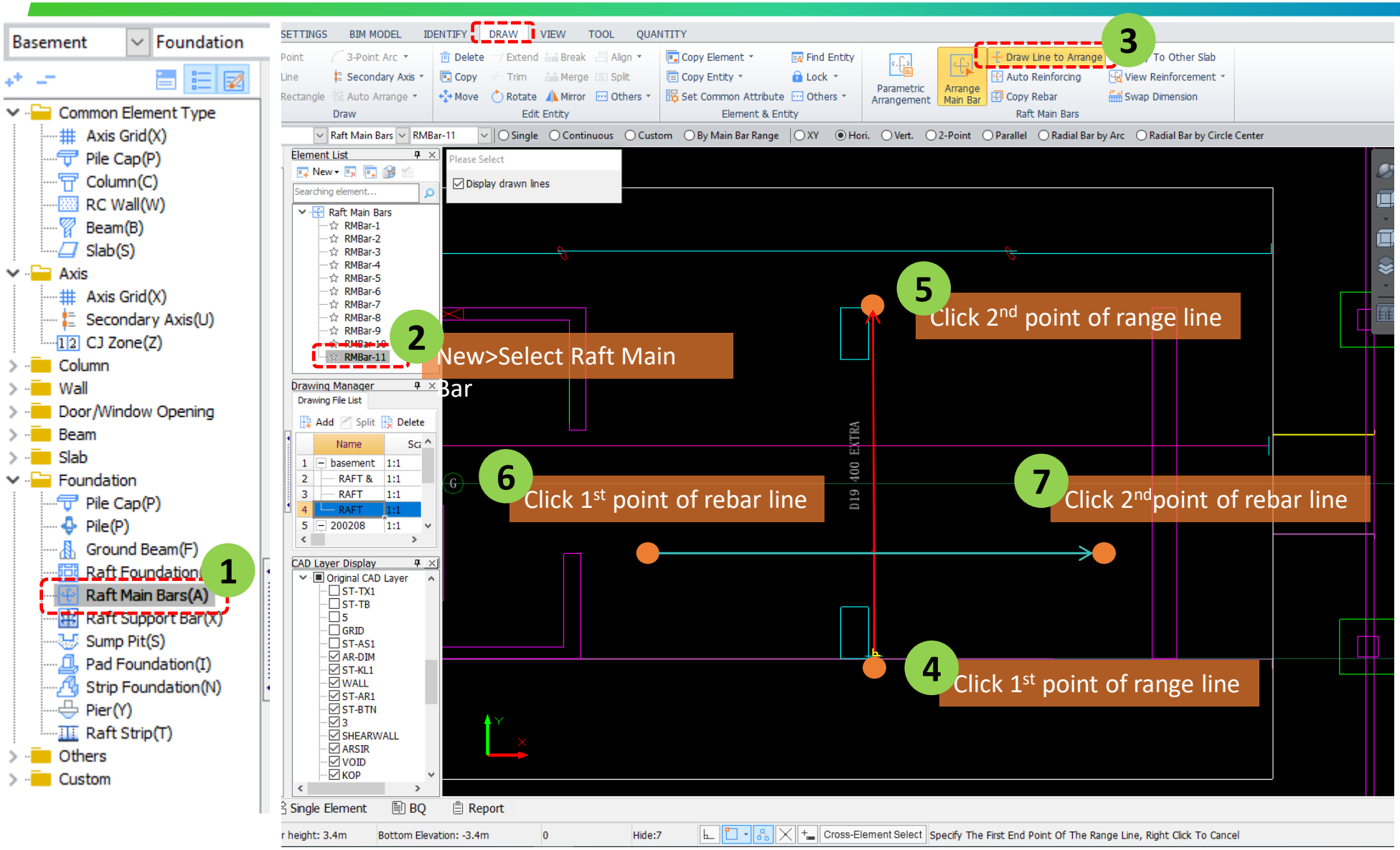


Parametric Arrangement

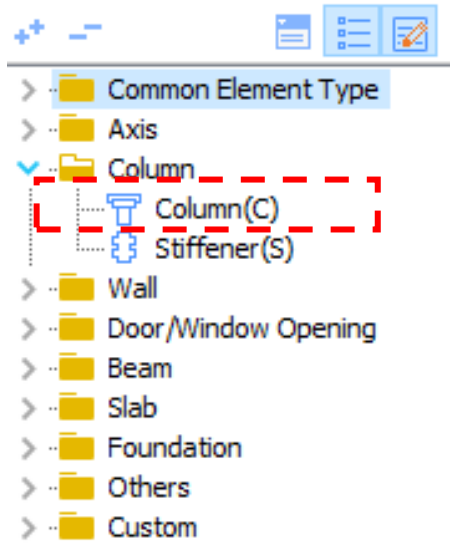
Draw Line to Arrangement

Arrangement Main Bar

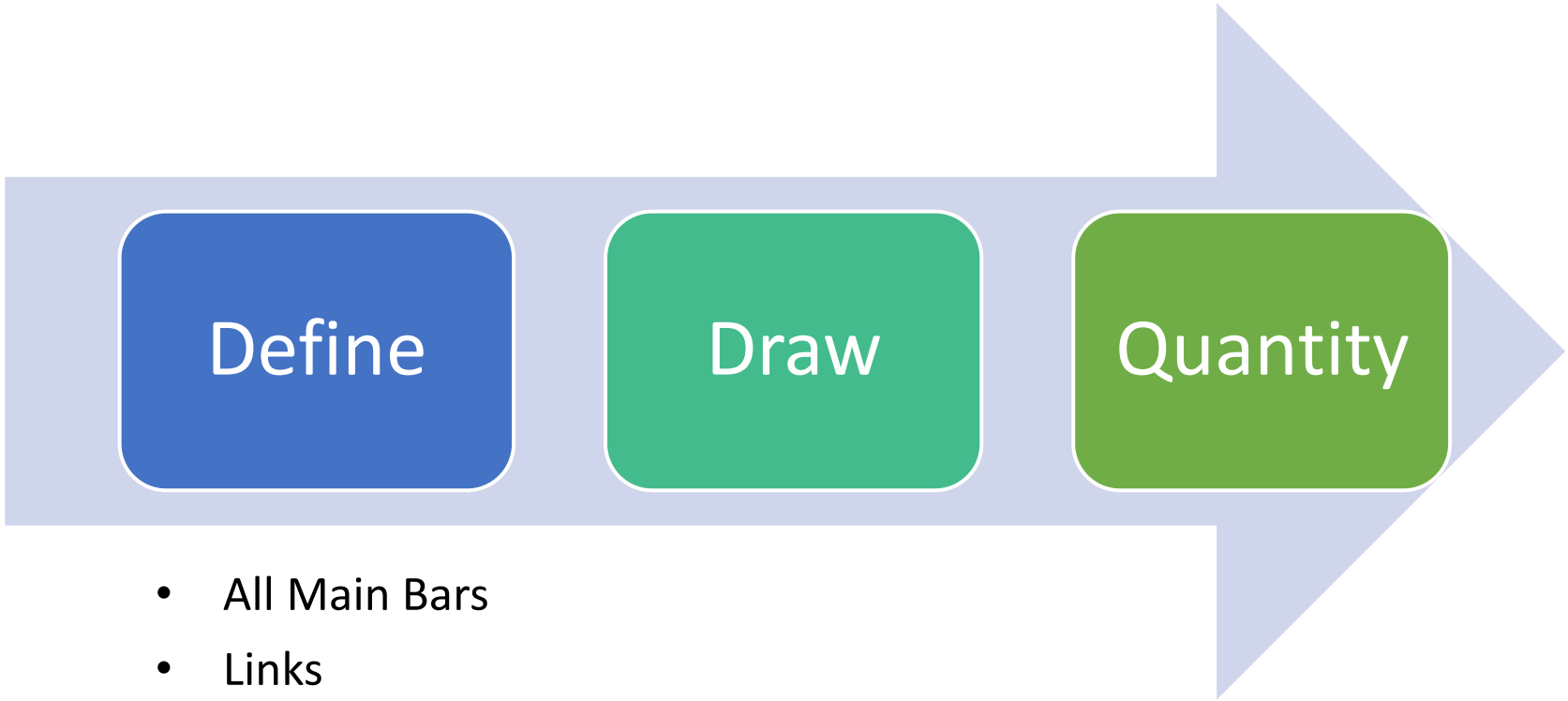

CUBICOST TRB C-III - [Project 1]
START
PROJECT SETTINGS
BIM MODEL
IDENTIFY
DRAW
VIEW
TOOL
QUANTITY
Tell me (Ctrl+Alt+E)
Select
Batch
Same-Name
Polyline
Extend
Break
Align
Trim
Merge
Split
Rotate
Mirror
Others
Copy Element
Copy Entity
Common Attribute
Find Entity
Lock
Others
Parametric Arrangement
Arrange Main Bar
Copy Rebar
Swap Dimension
2
In draw function, click Parametric Arrangement
BENTANG PENDEK (Lx)
BENTANG PANJANG (Ly)
D10-250
D10-300
D10-350
D10-400
D10-450
D10-225
Parametric Arrangement
New
Delete
Copy
Slab Name
Type
Gen
1 S-1
2 S-2
3 S-3
4 S-4
5 S-5
3
Select The raft type
4
Select the rebar arrangement type
Slab Reinforcements Layout Plan
(Sn/4-20*d)
(Sn/4+15*d)
5
key in the rebars
D10@250
D10@300
D10@350
D10@400
D10@450
D10@225
Clear span length of shorter span (Sn)
(Sn/4)
Clear span length of longer span (Ln)
Top bar
Bottom bar
Note: Rebar arrangement of this type can only be generated in rectangular slabs.
1
Click Raft Main Bars
Copy to Other Floors
Generate:
Rebar and Rebar Content
6
Click Generate
Modeling
Single Element
BQ
Report
X=410 Y=11534
Floor height: 3m
Bottom Elevation: 0m
0
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
1
SETTINGS
BIM MODEL
IDENTIFY
DRAW
VIEW
TOOL
QUANTITY
Draw Line to Arrange
3
Auto Reinforcing
Copy Rebar
Swap Dimension
Parametric Arrangement
Arrange Main Bar
Raft Main Bars
Element List
Drawing Manager
CAD Layer Display
2
New>Select Raft Main Bar
5
Click 2nd point of range line
6
Click 1st point of rebar line
7
Click 2nd point of rebar line
4
Click 1st point of range line
Single Element
BQ
Report
Cross-Element Select
Specify The First End Point Of The Range Line, Right Click To Cancel

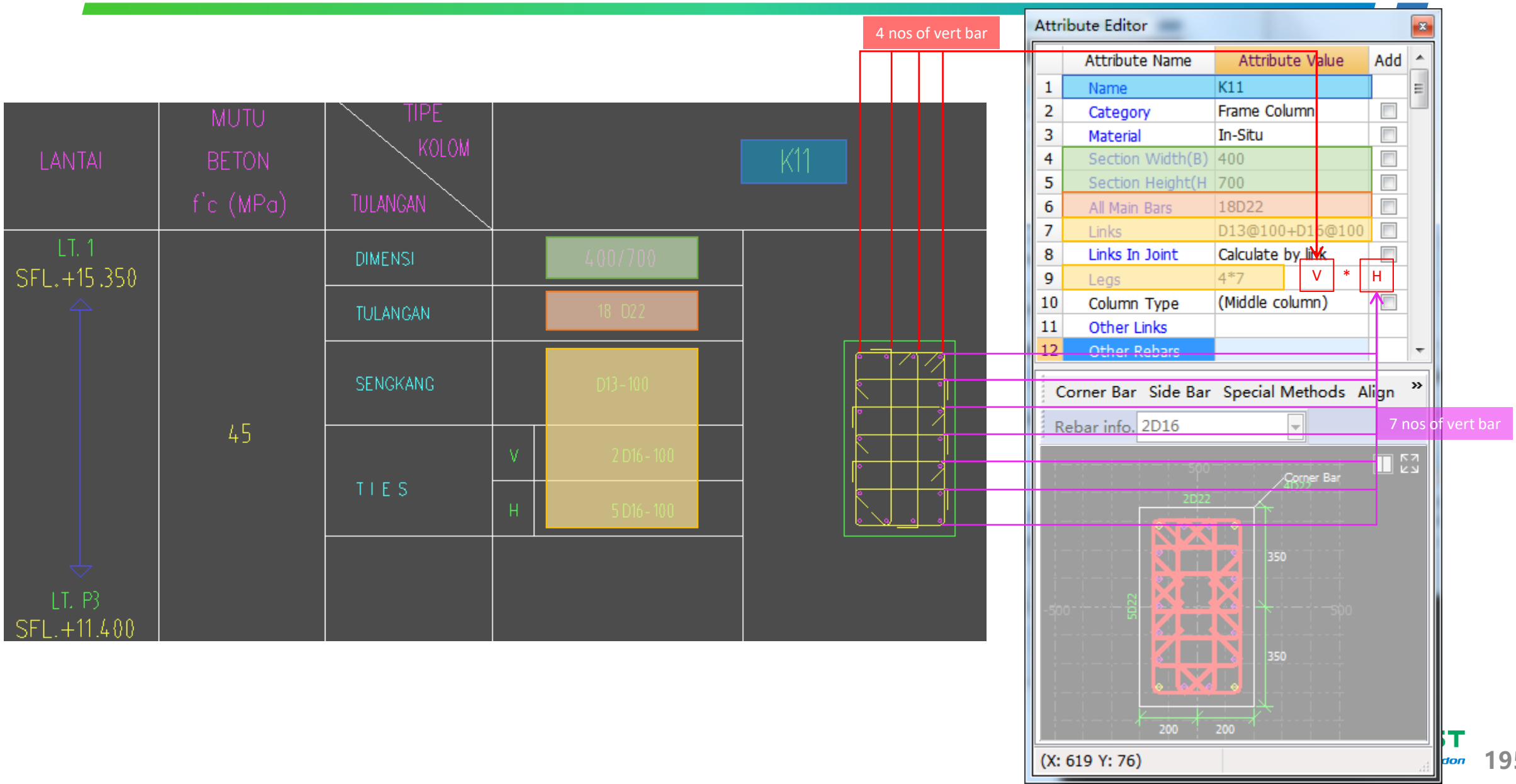
Point Type

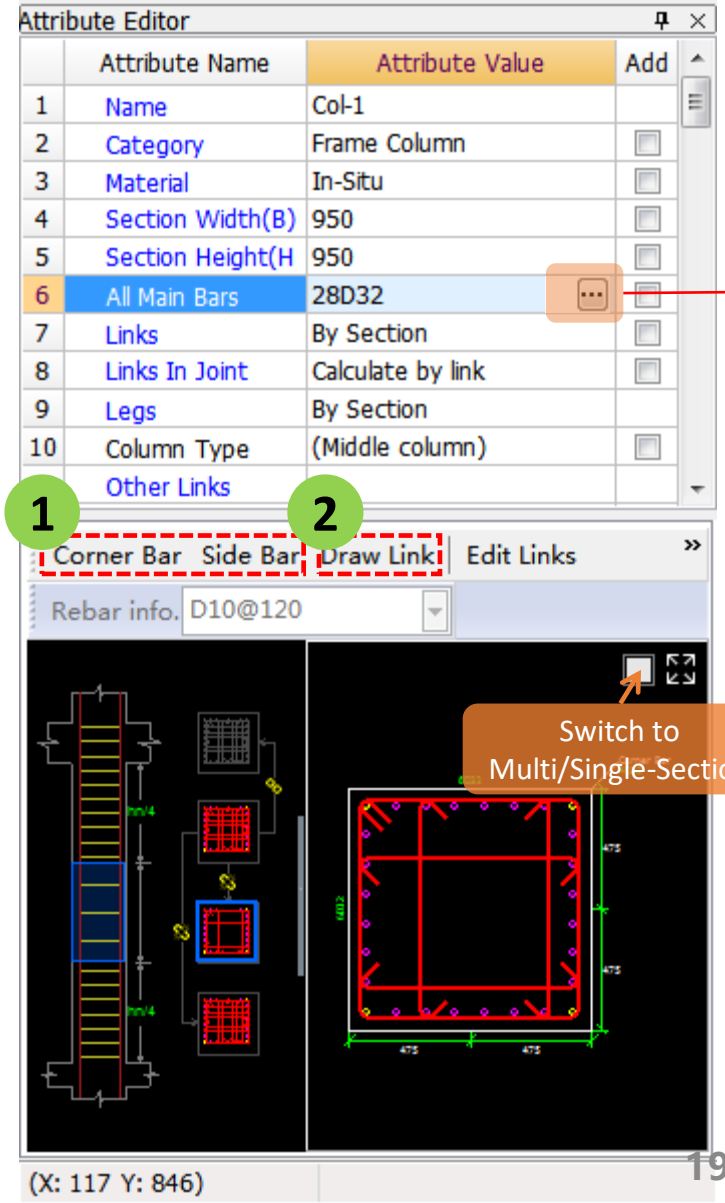


Column



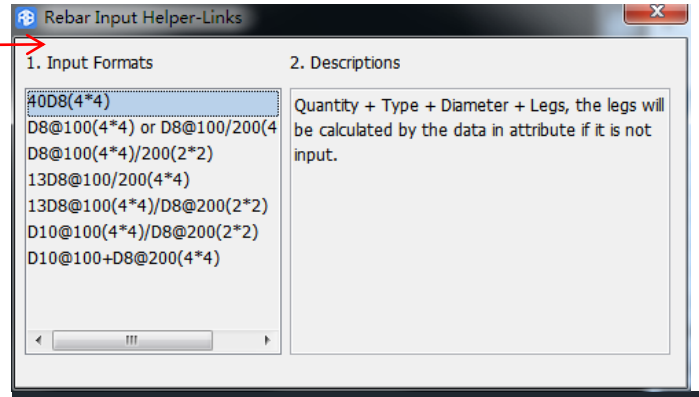
- All Main Bars
- Links
- Legs

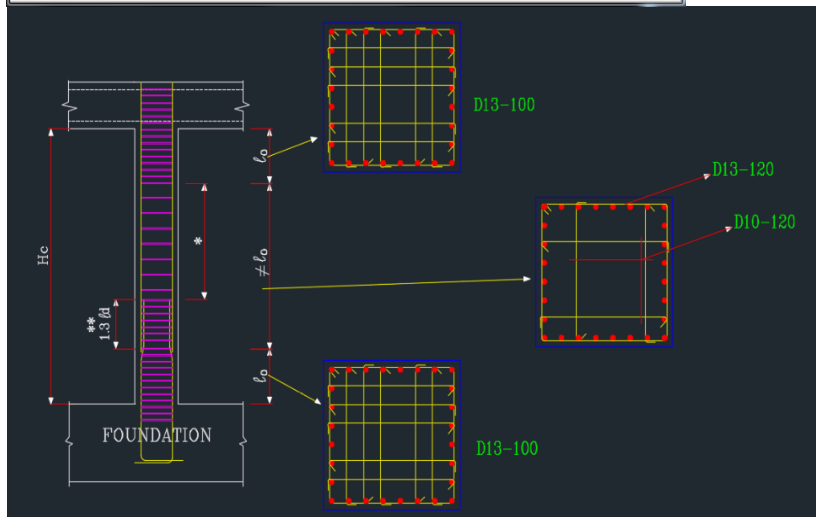

4 nos of vert bar
LANTAI
MUTU BETON f'c (MPa)
TIPE KOLOM
TULANGAN
K11
LT. 1
SFL.+15.350
LT. P3
SFL.+11.400
45
DIMENSI
400/700
TULANGAN
18 D22
SENGKANG
D13-100
TIES
V
2 D16-100
H
5 D16-100
Attribute Editor
Attribute Name
Attribute Value
Add
1 Name K11
2 Category Frame Column
3 Material In-Situ
4 Section 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 V * H
10 Column Type (Middle column)
11 Other Links
12 Other Rebars
Corner Bar Side Bar Special Methods Align
Rebar info. 2D16
7 nos of vert bar
Corner Bar
2D22
350
350
500
500
500
200
200
(X: 619 Y: 76)



Input main bars and links (sengkang) in attribute editor

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



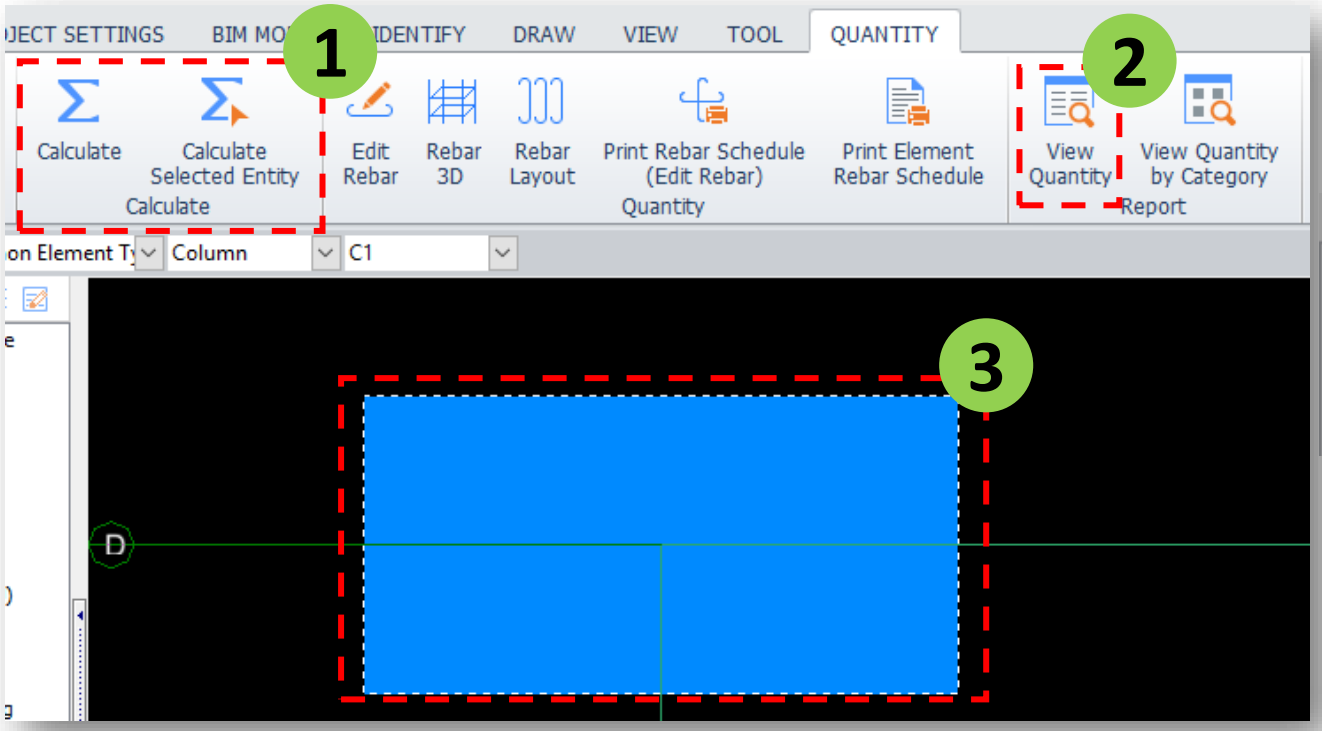


we can arrange, edit, or draw rebars in section

- 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

cubiCOST by Glodon

- 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

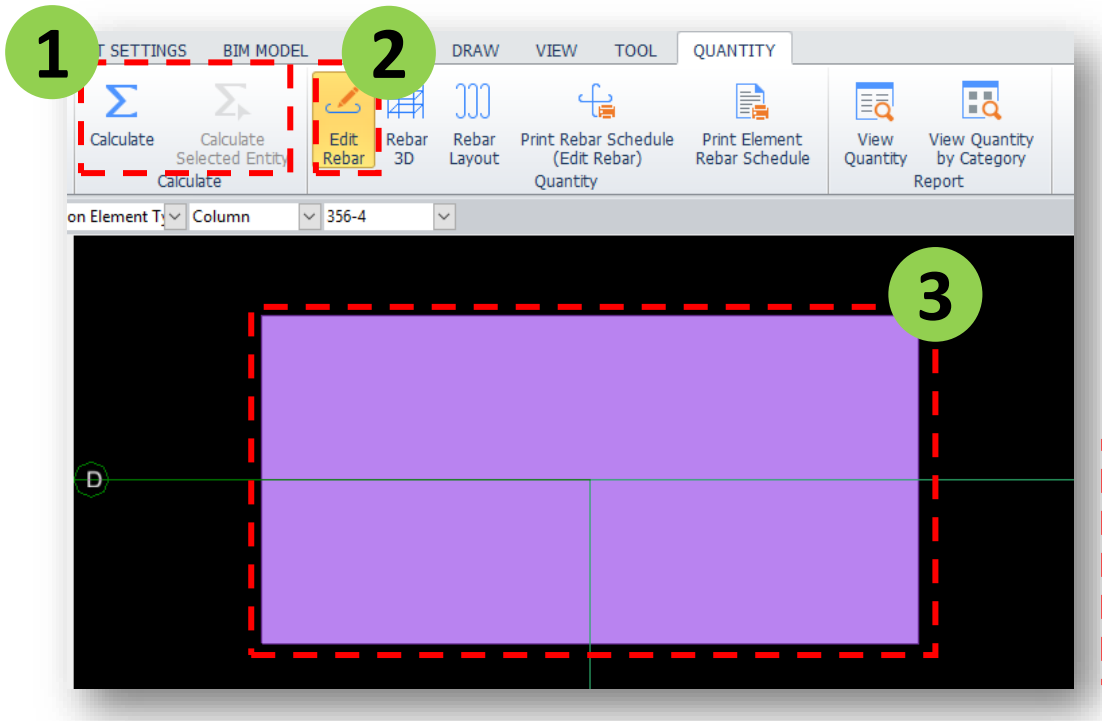


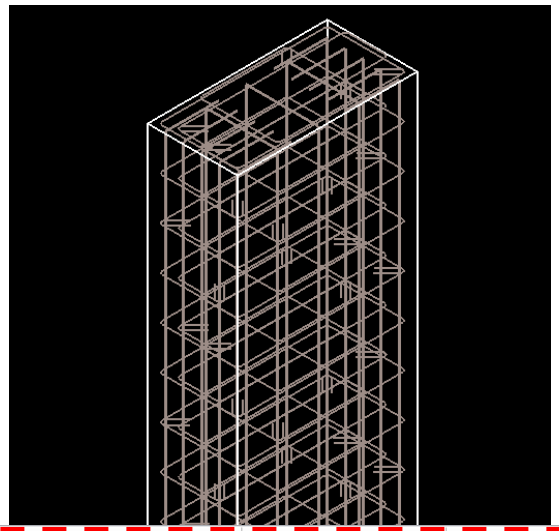
Rebar Gross Weight (kg): 168.423

4

	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

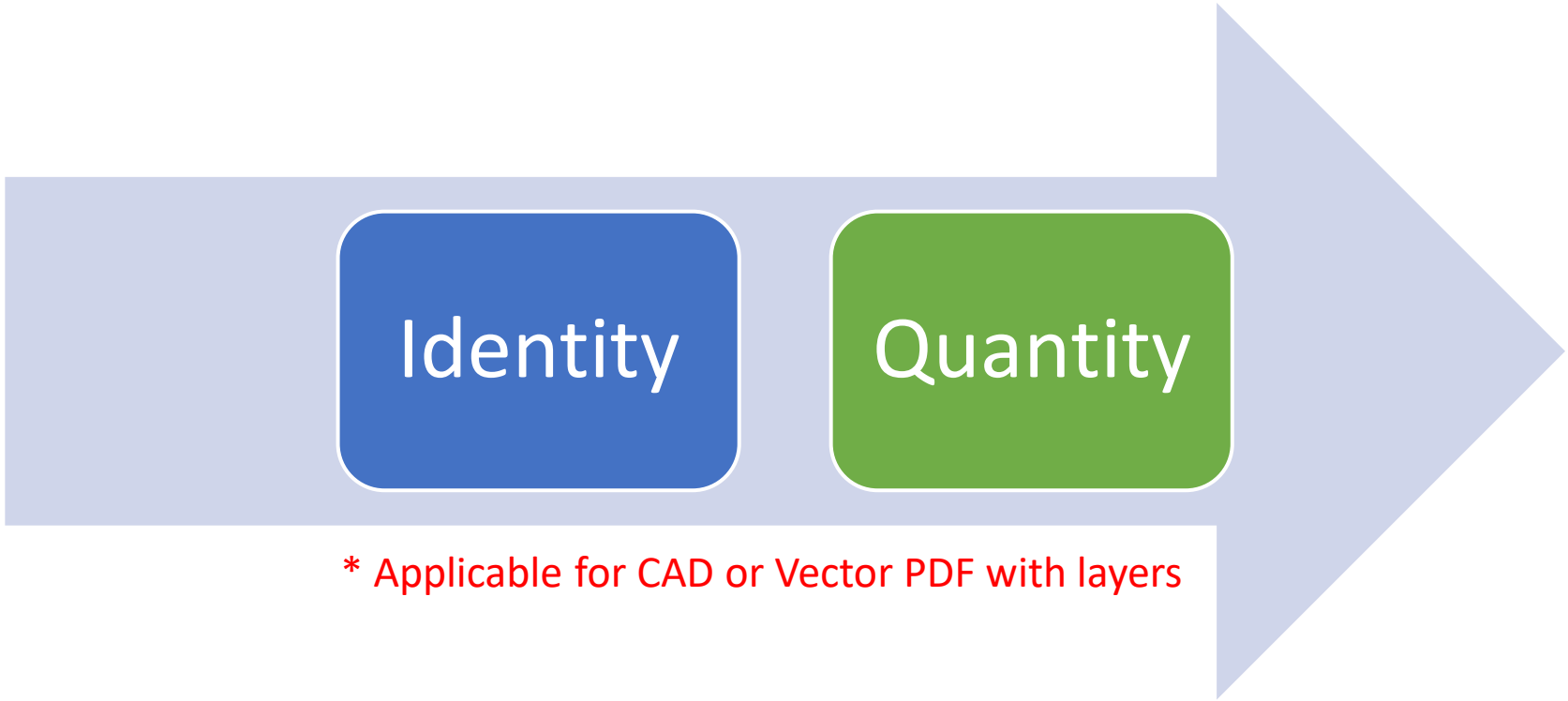
- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Click [Edit Rebar]
- Step 3: Select column
- Step 4: Check column quantity * Apply to all





4

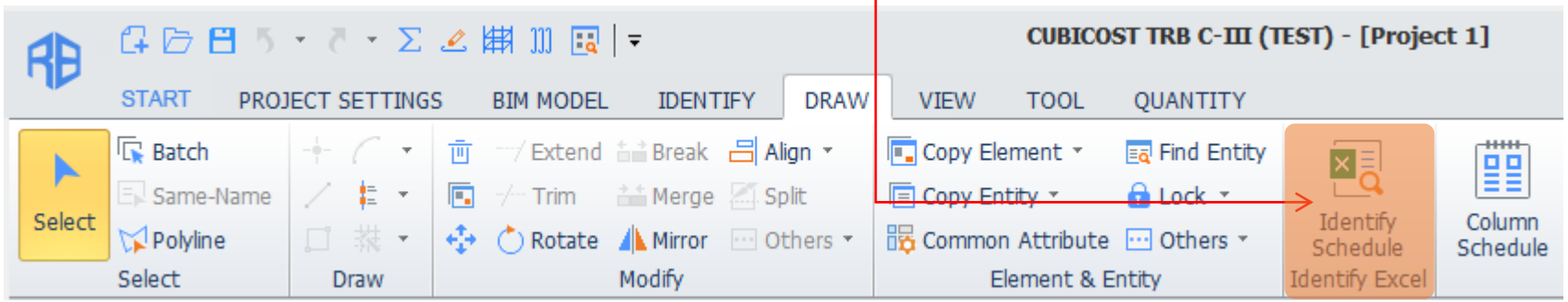
	Rebar	Strength	Diamete	Shape	Shape	Calculation Formula	Formula Description	Cutting-	Quantit	Total	Reba	
1*	1	BJTD-40	22	639	2960 264	3000-40+12*22	Column Height-Cover+Bend at column top	3224	12	115.522	Main bar	Construction Zone
2	2	BJTD-40	10	195	320 720	2*(720+320)+17.8*d		2258	16	22.291	Link	Default Construction Zone
3	3	BJTD-40	10	485	320	320+17.8*d		498	78	23.967	Hook	Default Construction Zone

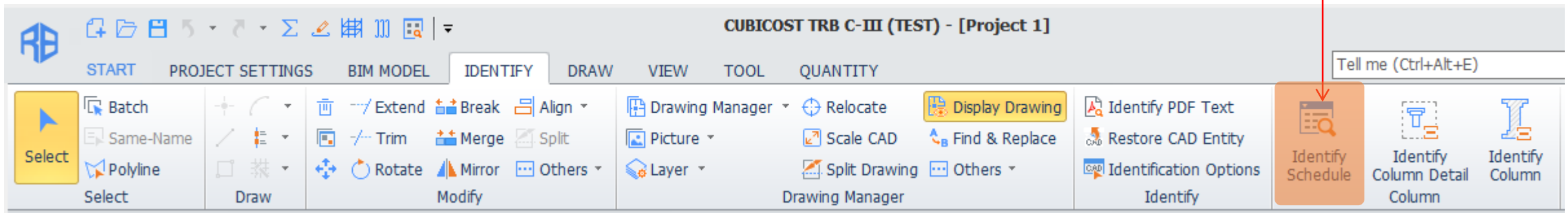


* Applicable for CAD or Vector PDF with layers

Identify Column Schedule

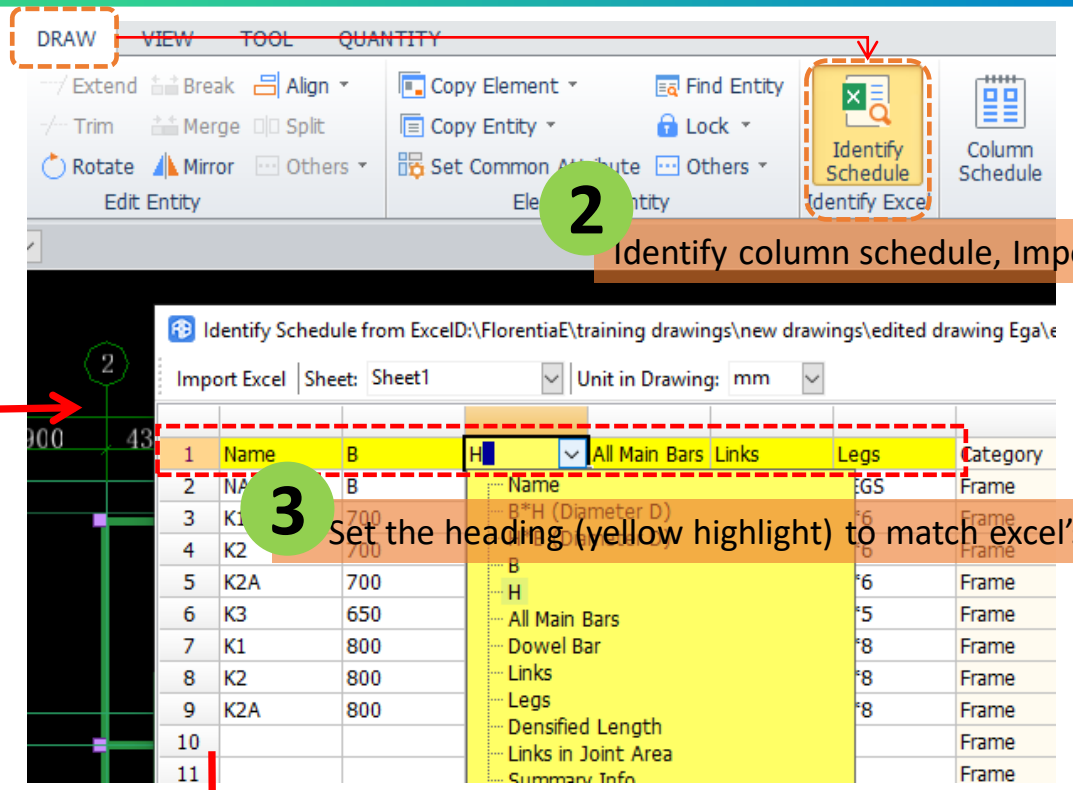
- Excel
- CAD or Vector PDF





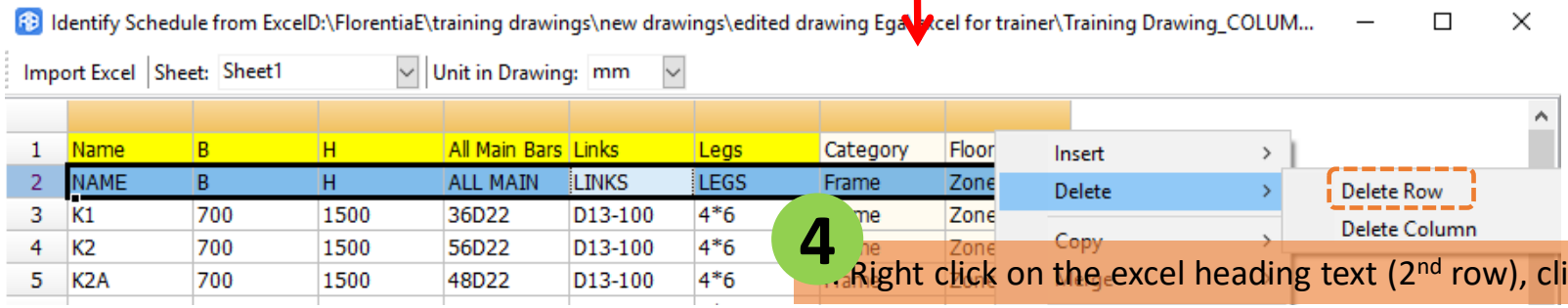
1. Prepare Schedule in Excel

	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



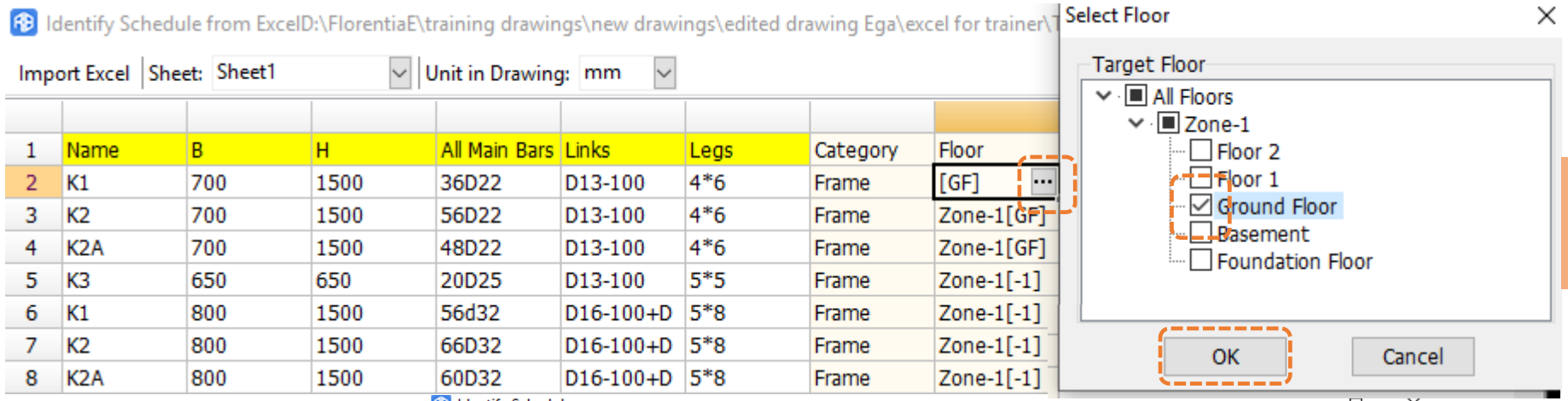
2 Identify column schedule, Import Excel

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



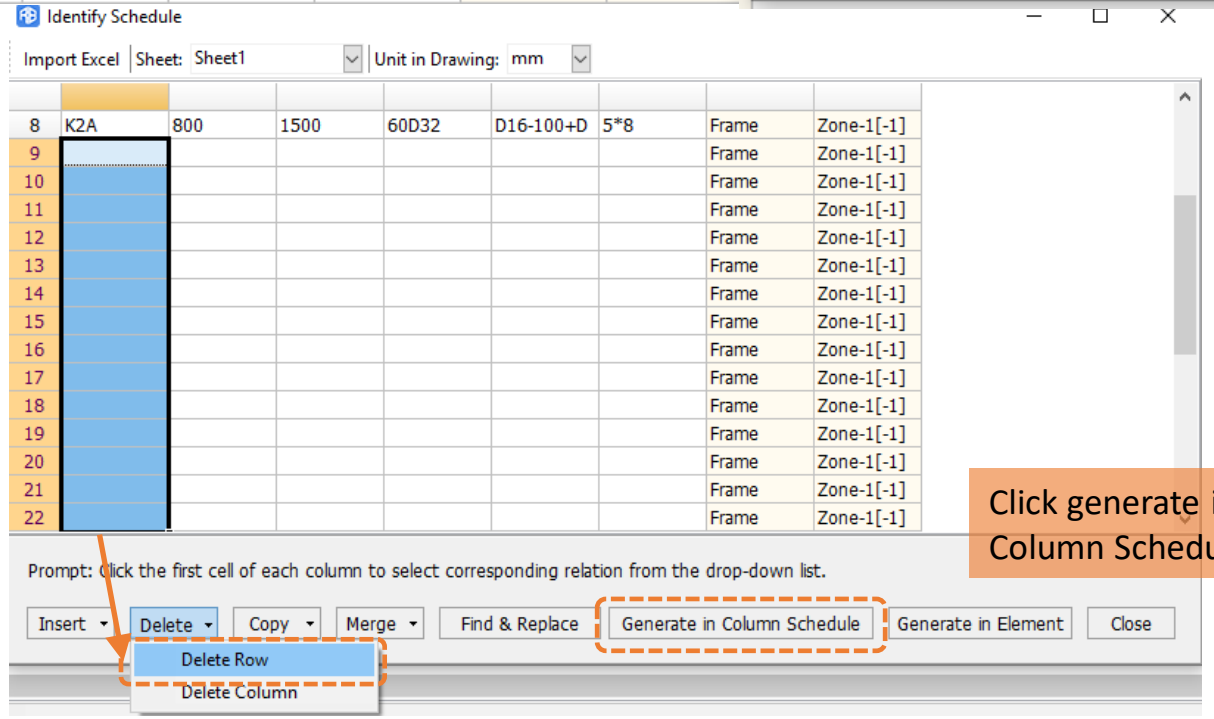
	Name	B	H	All Main Bars	Links	Legs	Category	Floor
2	NAME	B	H	ALL MAIN	LINKS	LEGS	Frame	Zone
3	K1	700	1500	36D22	D13-100	4*6		
4	K2	700	1500	56D22	D13-100	4*6		
5	K2A	700	1500	48D22	D13-100	4*6		

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



5

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

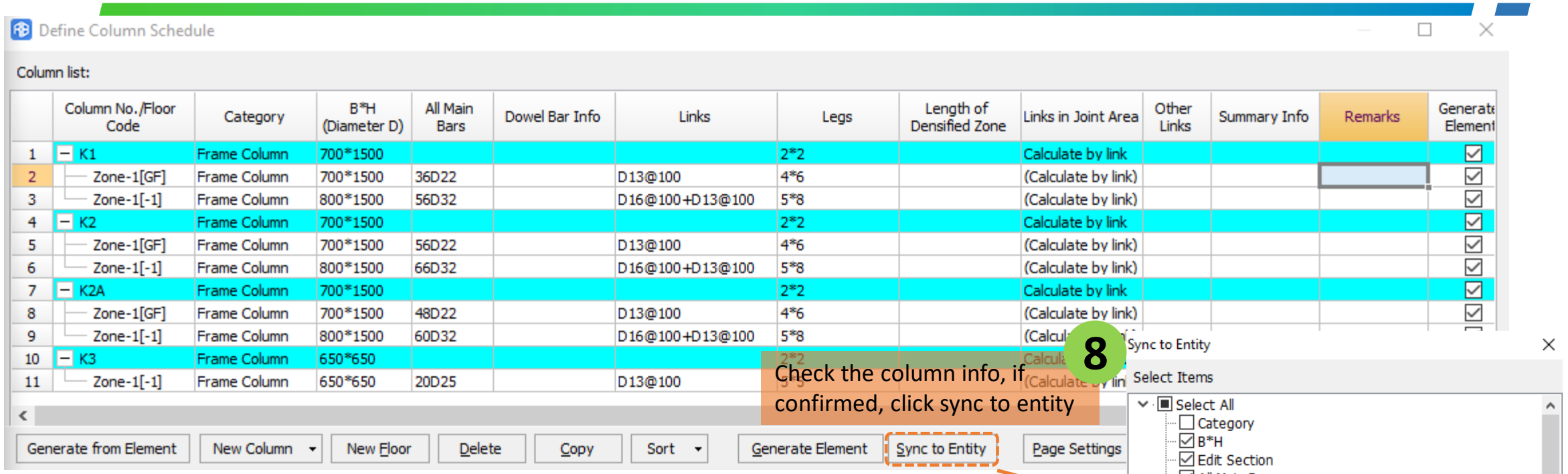


6

Block ALL empty rows and delete rows

7

Click generate in Column Schedule



Additional information:

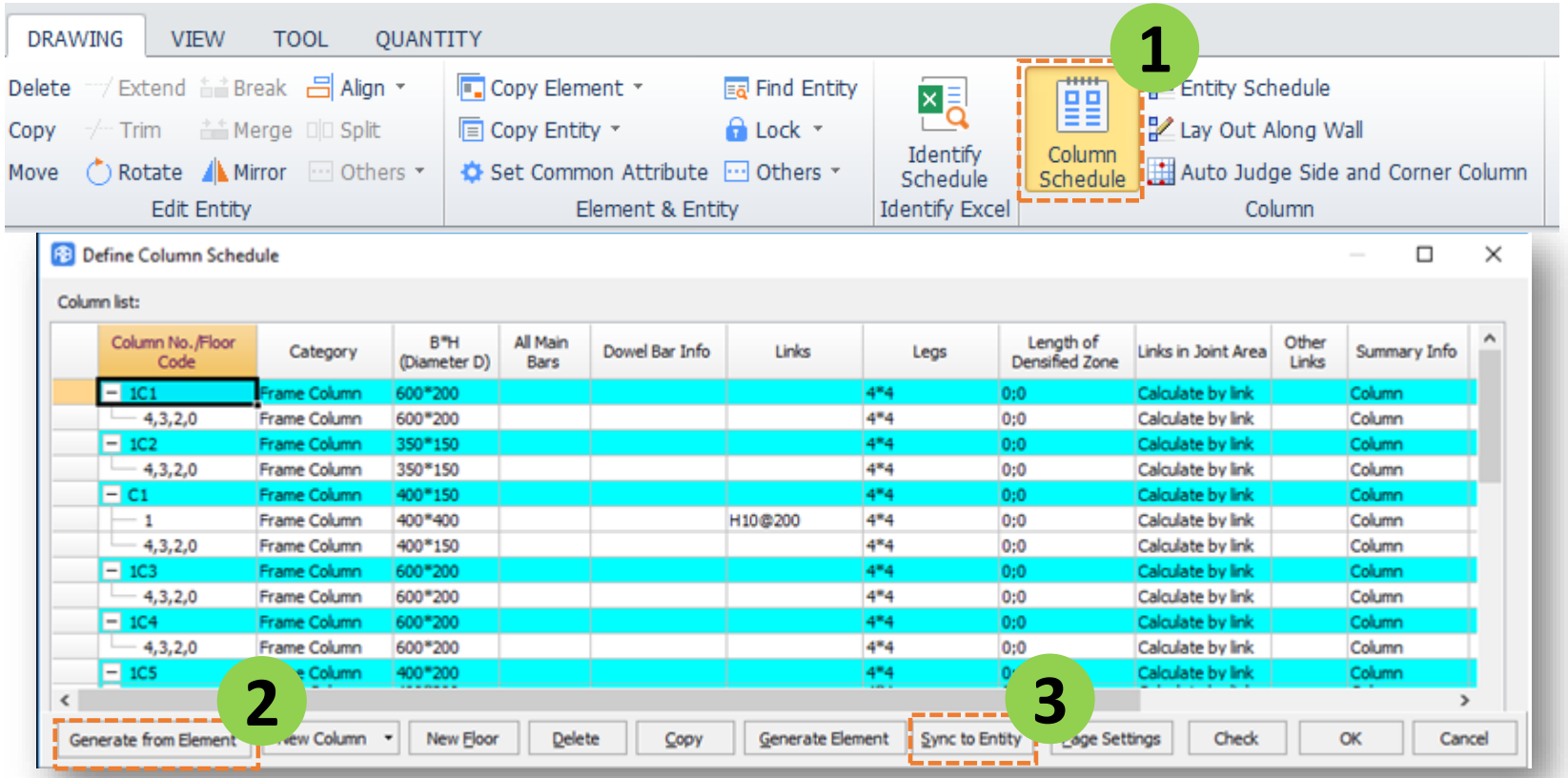
✓ **You can input the rebars in column schedule as well.**

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

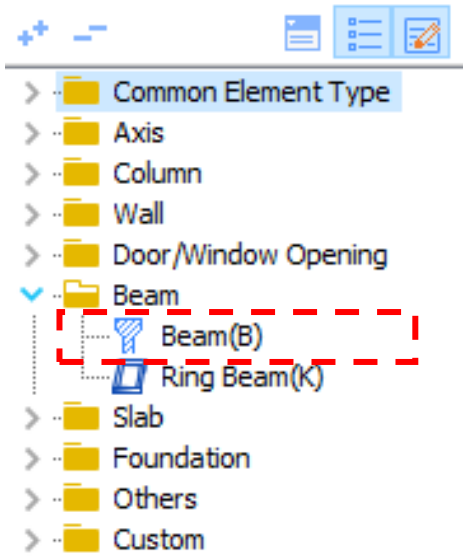
✓ **If the elements already modelled,**

click "**generate from element**" so the entity info is imported to the schedule → key in the rebars information → "**sync to entity**"

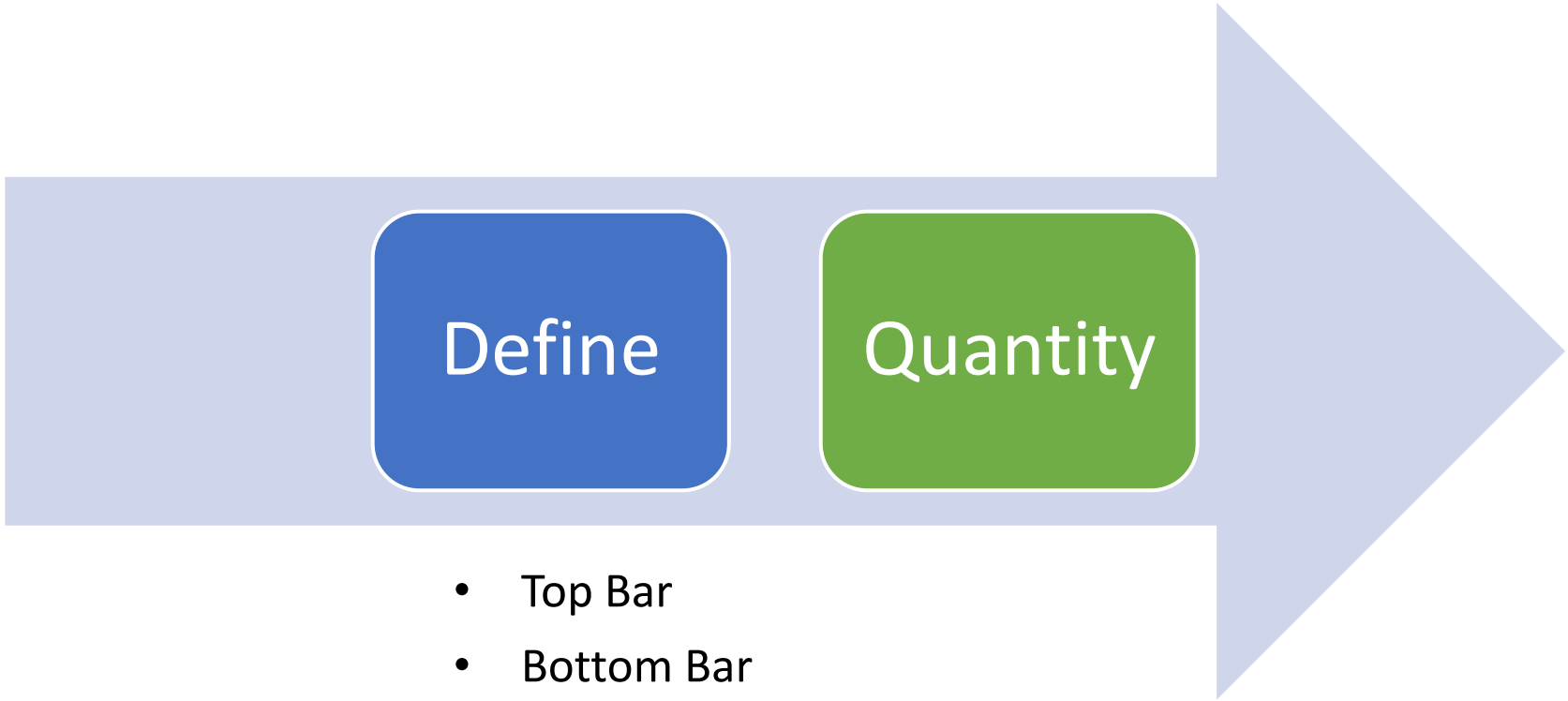
- Step 1: Tab {Draw}, Click [Column Schedule]
- Step 2: Click [Generate from Element] to generate all the defined column info
- Step 3: Modify (if any) and [Sync to Entity]



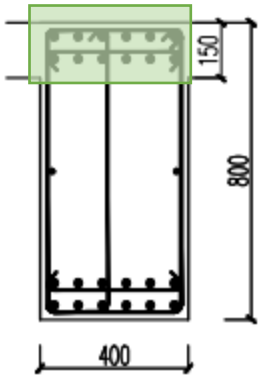
Linear Type

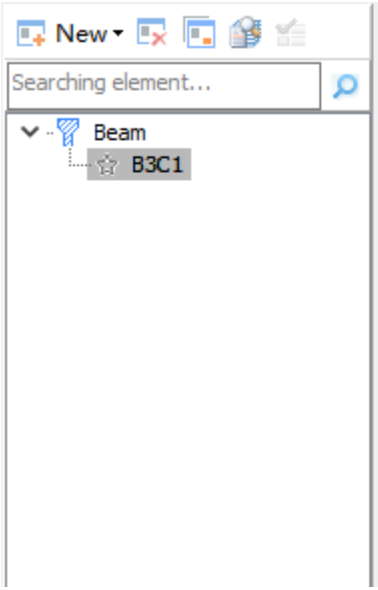


Beam



- 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	



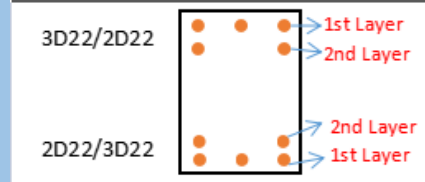
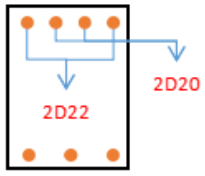
Edit Attribute

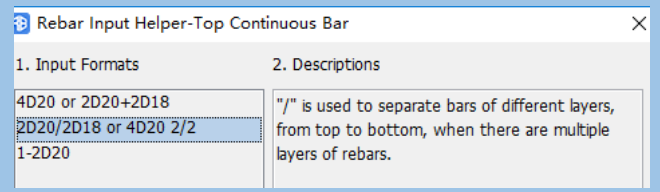
	Attribute Name	Attribute Value	Add
1	Name	B3C1	
2	Category	Floor Frame Beam	☐
3	Material	In-Situ	☐
4	Section Width(mm)	400	☐
5	Section Height(mm)	800	☐
6	Axis from Left Side(mm)	(200)	☐
7	Span Quantity		☐
8	Links	D13@100(3)	☐
9	Legs	3	
10	Top Continuous Bar	6D22/6D22	☐
11	Bottom Continuous Bar	6D22/6D22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

Define here
or
in [Side Label]

Important Tips of Beam

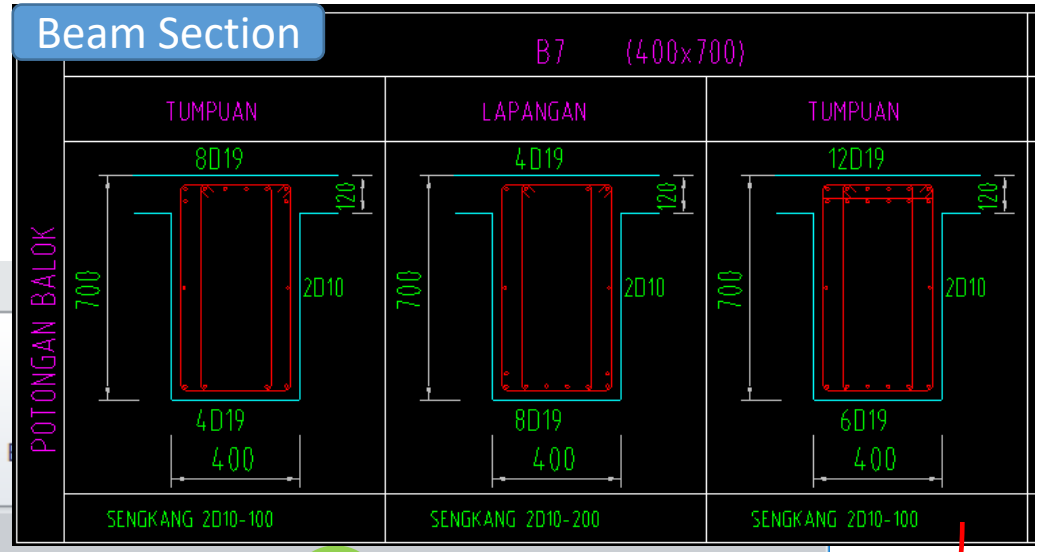
1) Different between '+'& '/'

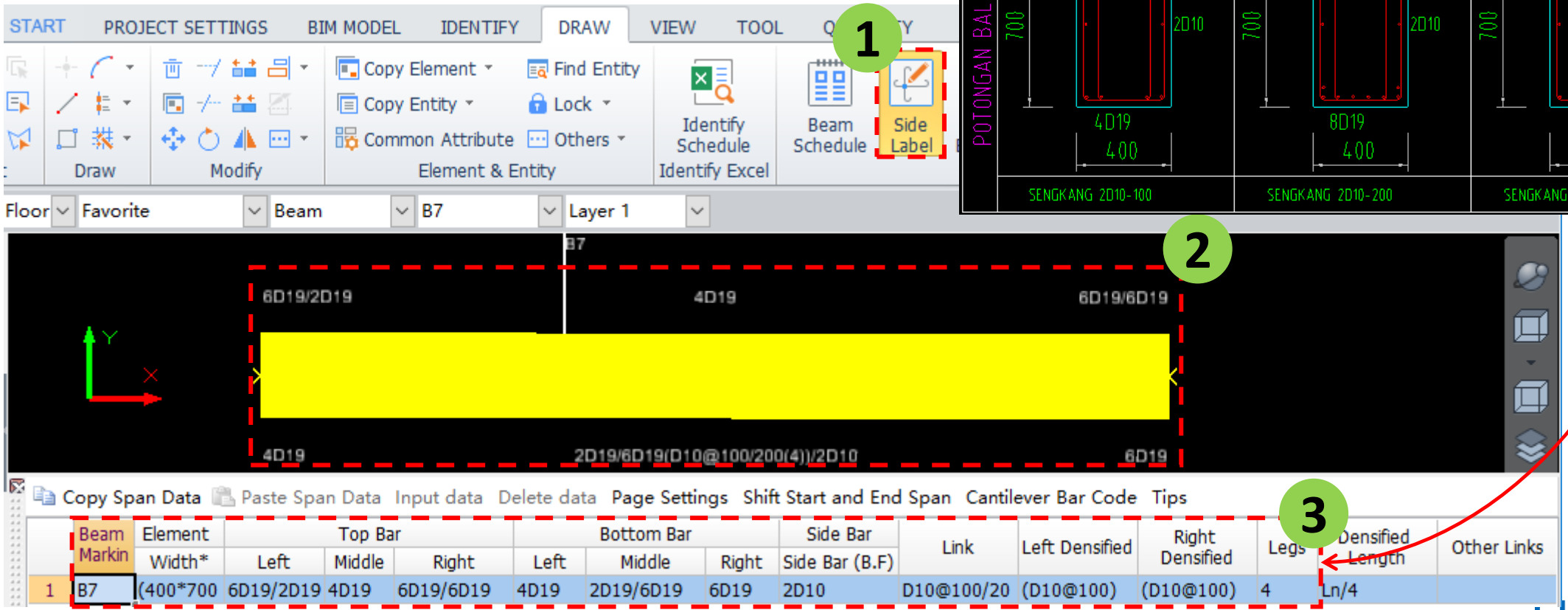
Beam Cut Section with"/" Eg.:3D22/2D22	Beam Cut Section with"+" Eg.:2D22+2D20
	



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

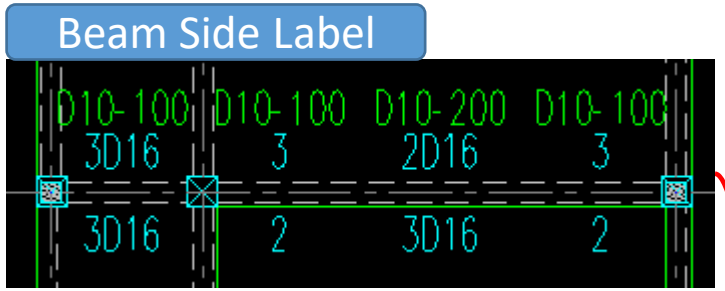
- Step 1: Tab {Draw}, Click [Side Label]
- Step 2: Select Beam
- Step 3: Input Rebar Info

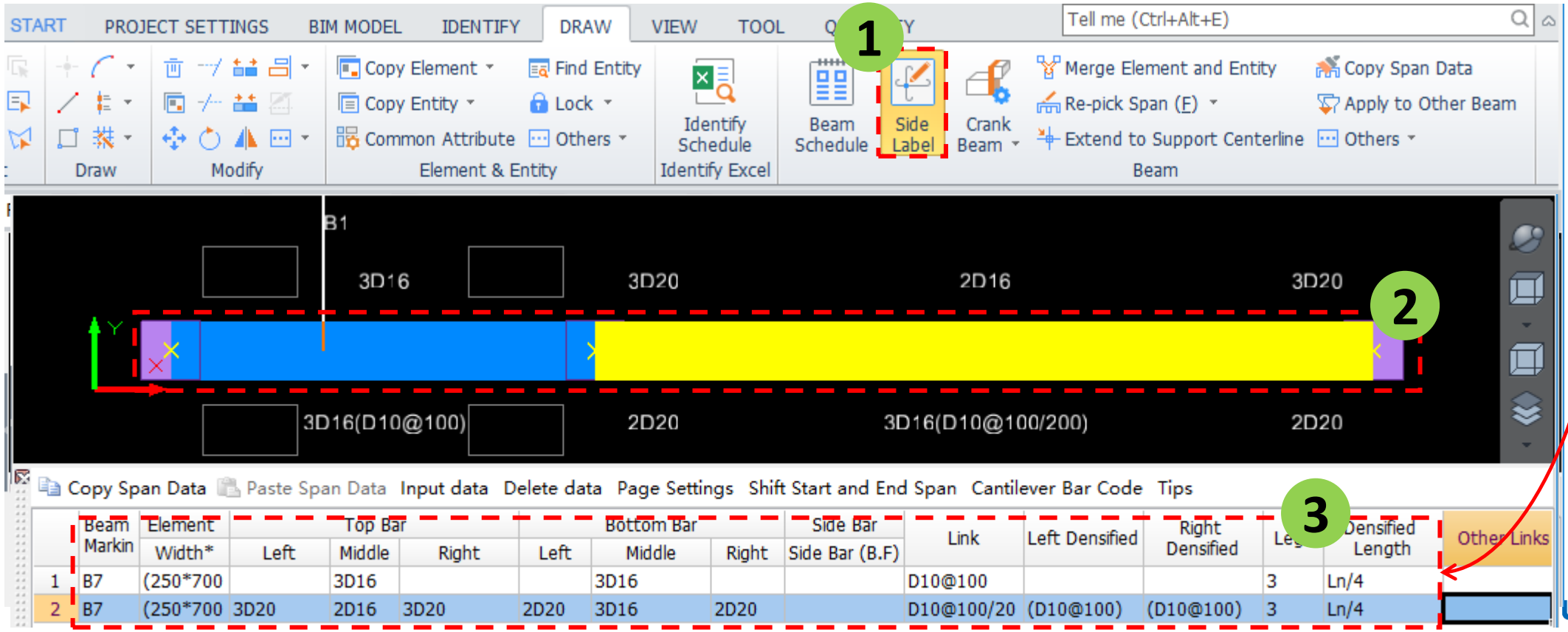




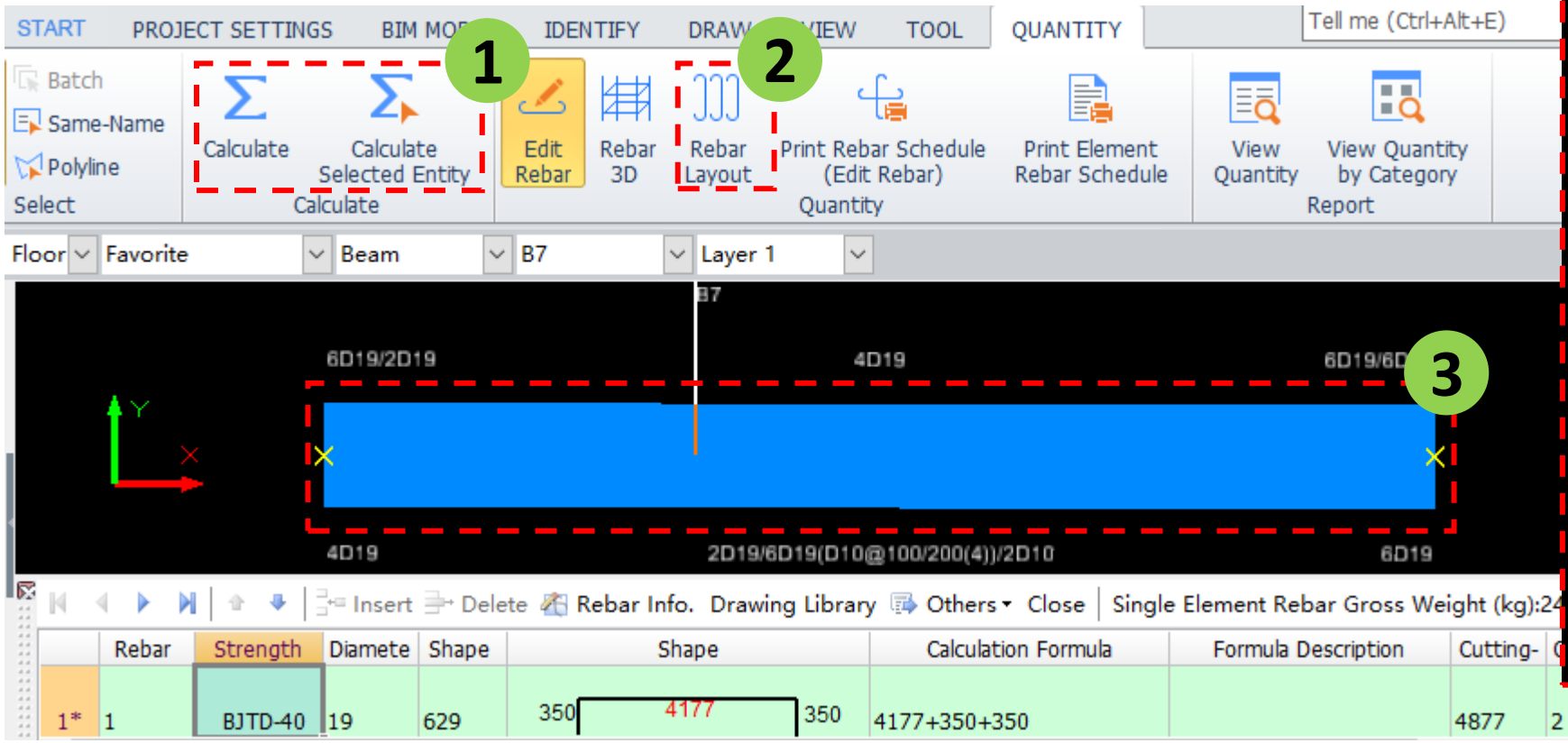
	Beam Markin	Element Width*	Top Bar Left	Top Bar Middle	Top Bar Right	Bottom Bar Left	Bottom Bar Middle	Bottom Bar Right	Side Bar Side Bar (B.F)	Link	Left Densified	Right Densified	Legs	Densified Length	Other Links
1	B7	(400*700	6D19/2D19	4D19	6D19/6D19	4D19	2D19/6D19	6D19	2D10	D10@100/20	(D10@100)	(D10@100)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

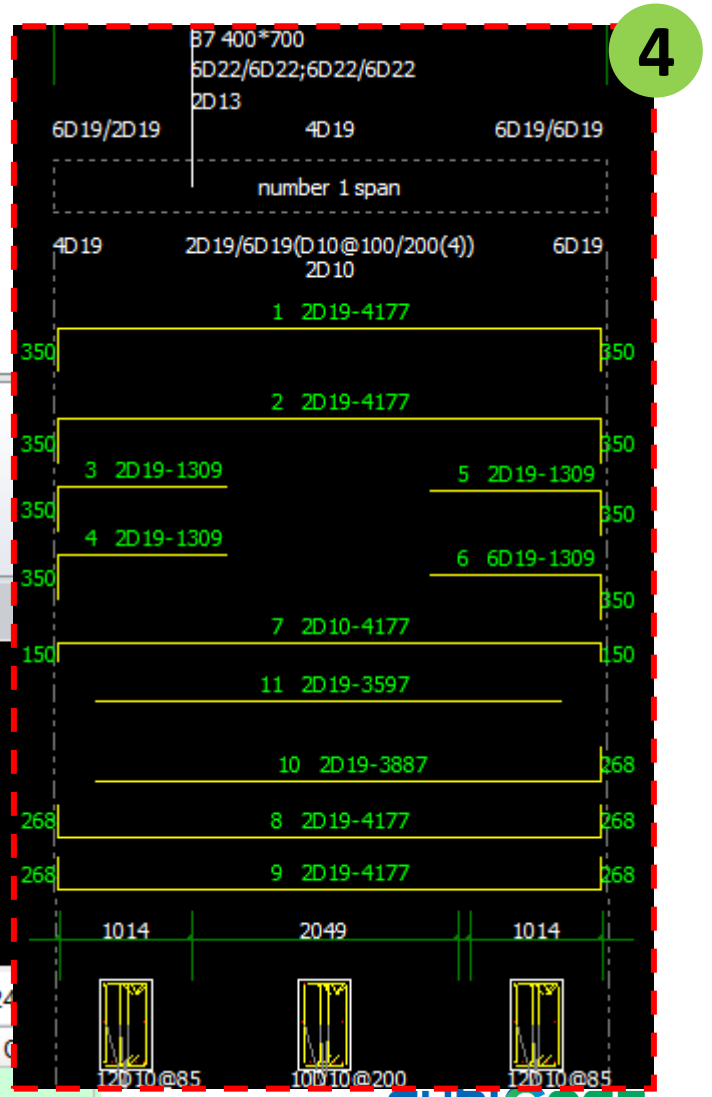
- Step 1: Tab {Draw}, Click [Side Label]
- Step 2: Select Beam
- Step 3: Input Rebar Info

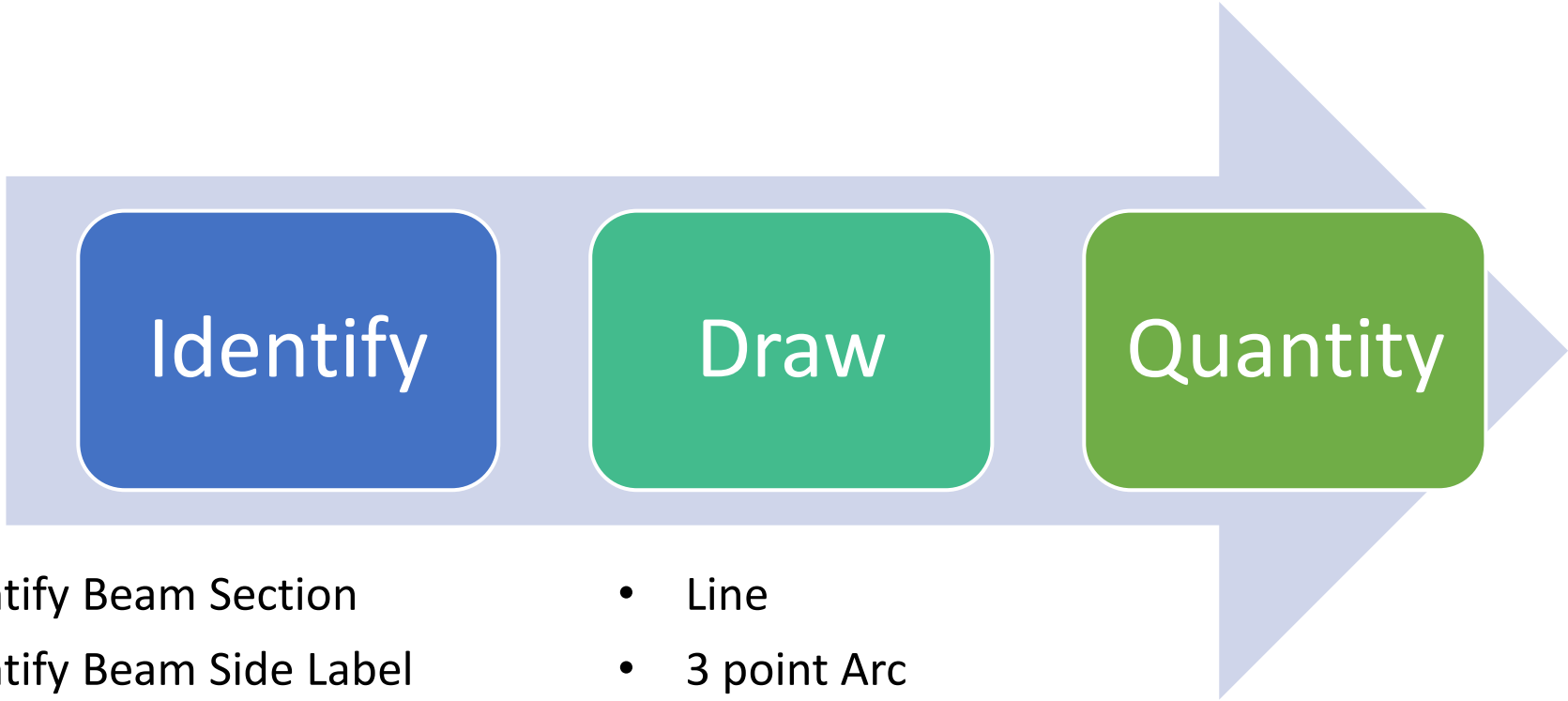




- Step 1: Tab {Quantity}, Select [Calculate] or [Calculate Selected Entity]
- Step 2: Click [Rebar Layout]
- Step 3: Select Beam
- Step 4: Check Rebar Arrangement * Apply to all



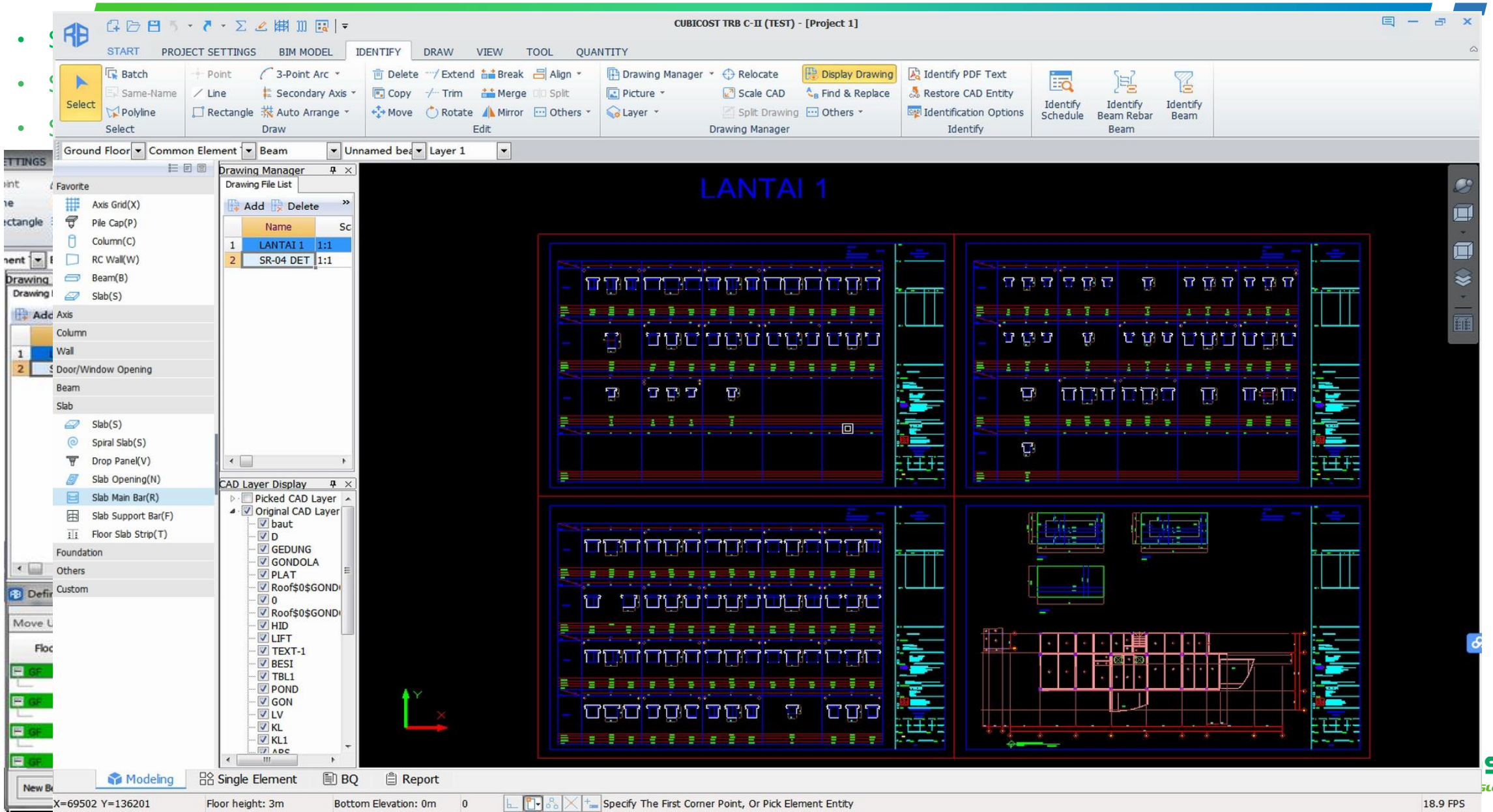




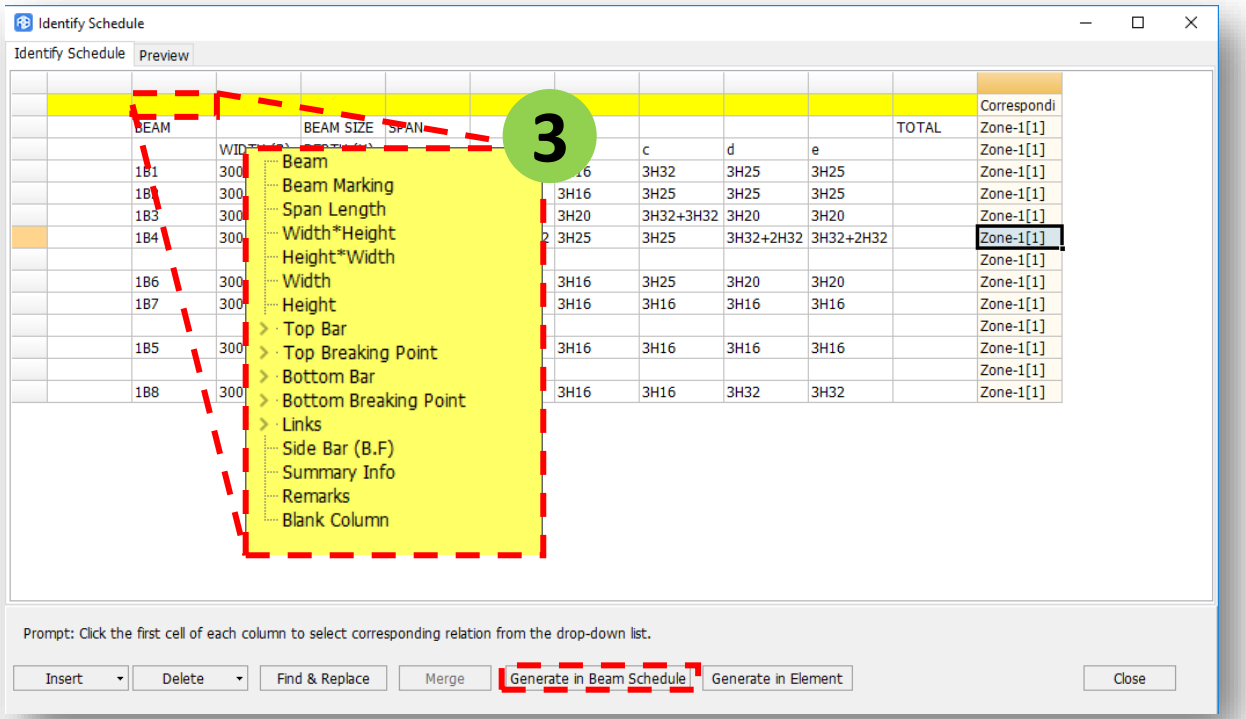
- Identify Beam Section
- Identify Beam Side Label
- Identify CAD/Excel Schedule

- Line
- 3 point Arc

* F4 to change alignment

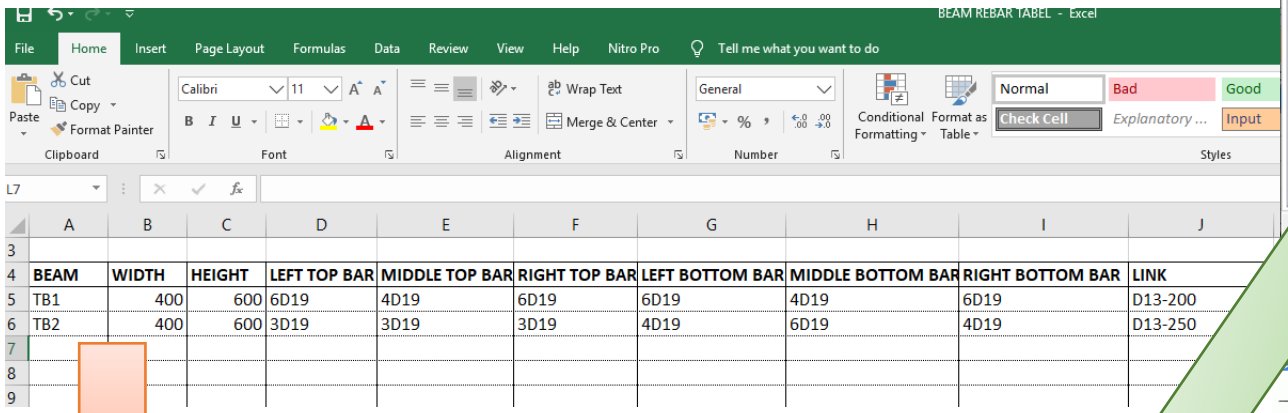

CUBICOST TRB C-II (TEST) - [Project 1]
START
PROJECT SETTINGS
BIM MODEL
IDENTIFY
DRAW
VIEW
TOOL
QUANTITY
Select
Batch
Same-Name
Polyline
Point
Line
Rectangle
3-Point Arc
Secondary Axis
Auto Arrange
Delete
Copy
Move
Extend
Trim
Rotate
Break
Merge
Mirror
Align
Split
Others
Drawing Manager
Picture
Layer
Relocate
Scale CAD
Split Drawing
Display Drawing
Find & Replace
Others
Identify PDF Text
Restore CAD Entity
Identification Options
Identify Schedule
Identify Beam Rebar
Identify Beam
Ground Floor
Common Element
Beam
Unnamed bea
Layer 1
Favorite
Axis Grid(X)
Pile Cap(P)
Column(C)
RC Wall(W)
Beam(B)
Slab(S)
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
Drawing Manager
Drawing File List
Add
Delete
Name
LANTAI 1
SR-04 DET
CAD Layer Display
Picked CAD Layer
Original CAD Layer
baut
D
GEDUNG
GONDOLA
PLAT
HID
LIFT
TEXT-1
BESI
TBL1
POND
GON
LV
KL
KL1
LANTAI 1
Modeling
Single Element
BQ
Report
X=69502 Y=136201
Floor height: 3m
Bottom Elevation: 0m
0
Specify The First Corner Point, Or Pick Element Entity
18.9 FPS

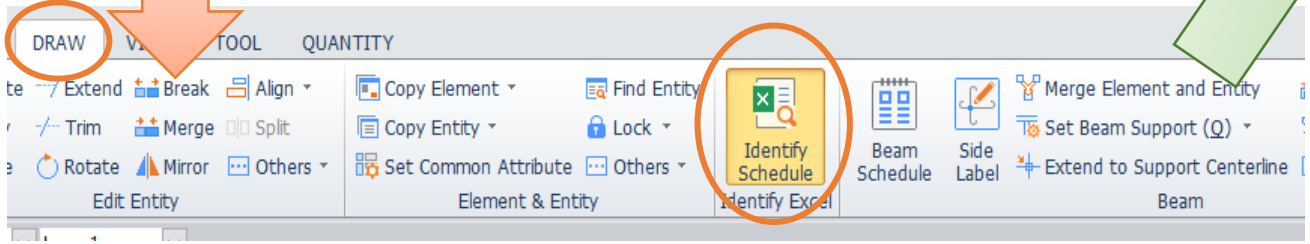
- Step 1: Tab {Identify}, Select [Identify Schedule]
- Step 2: Highlight Schedule & right click
- Step 3: Nominate the corresponding column & [Generate in Beam Schedule]

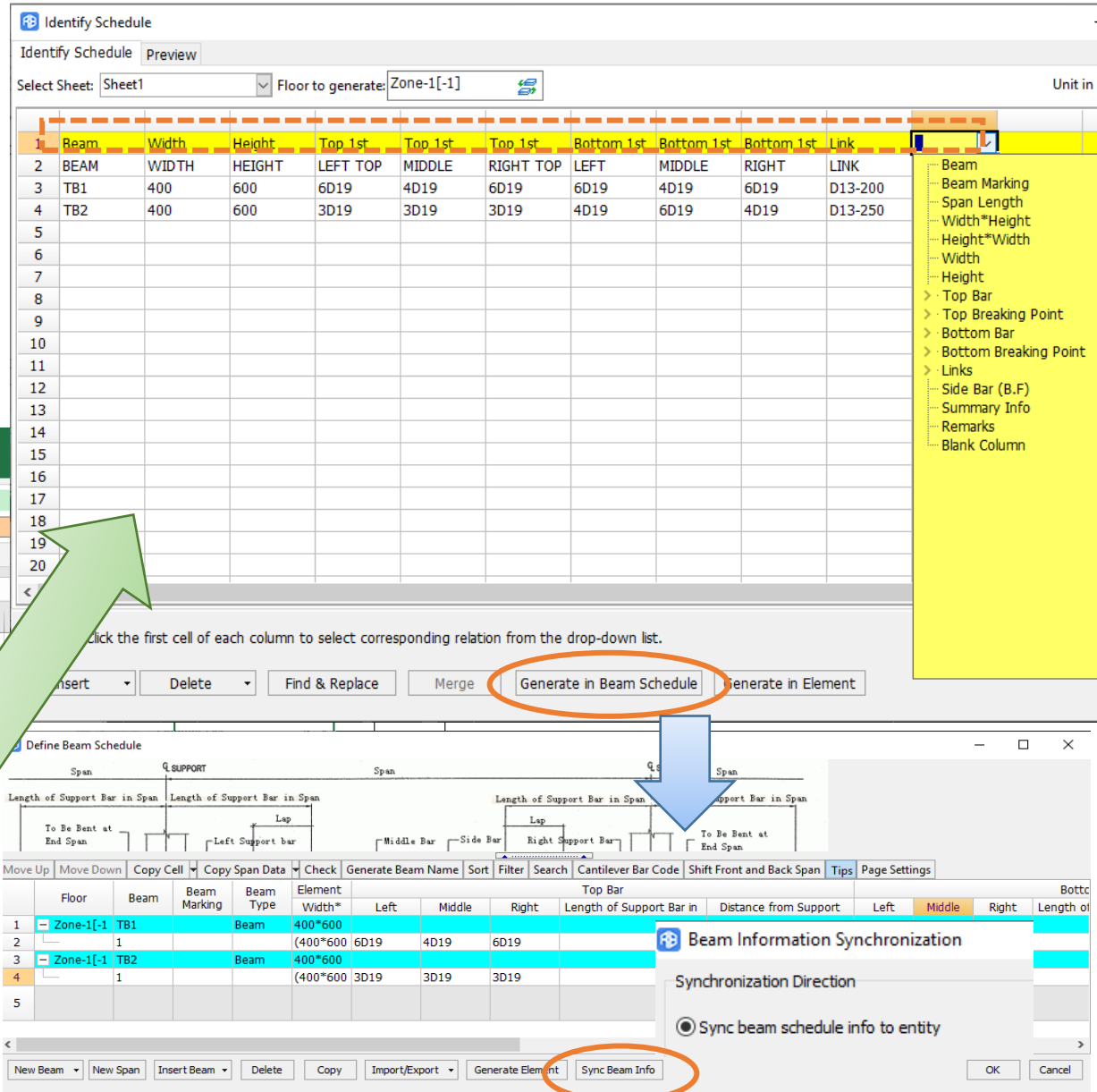


Beam – Identify Schedule

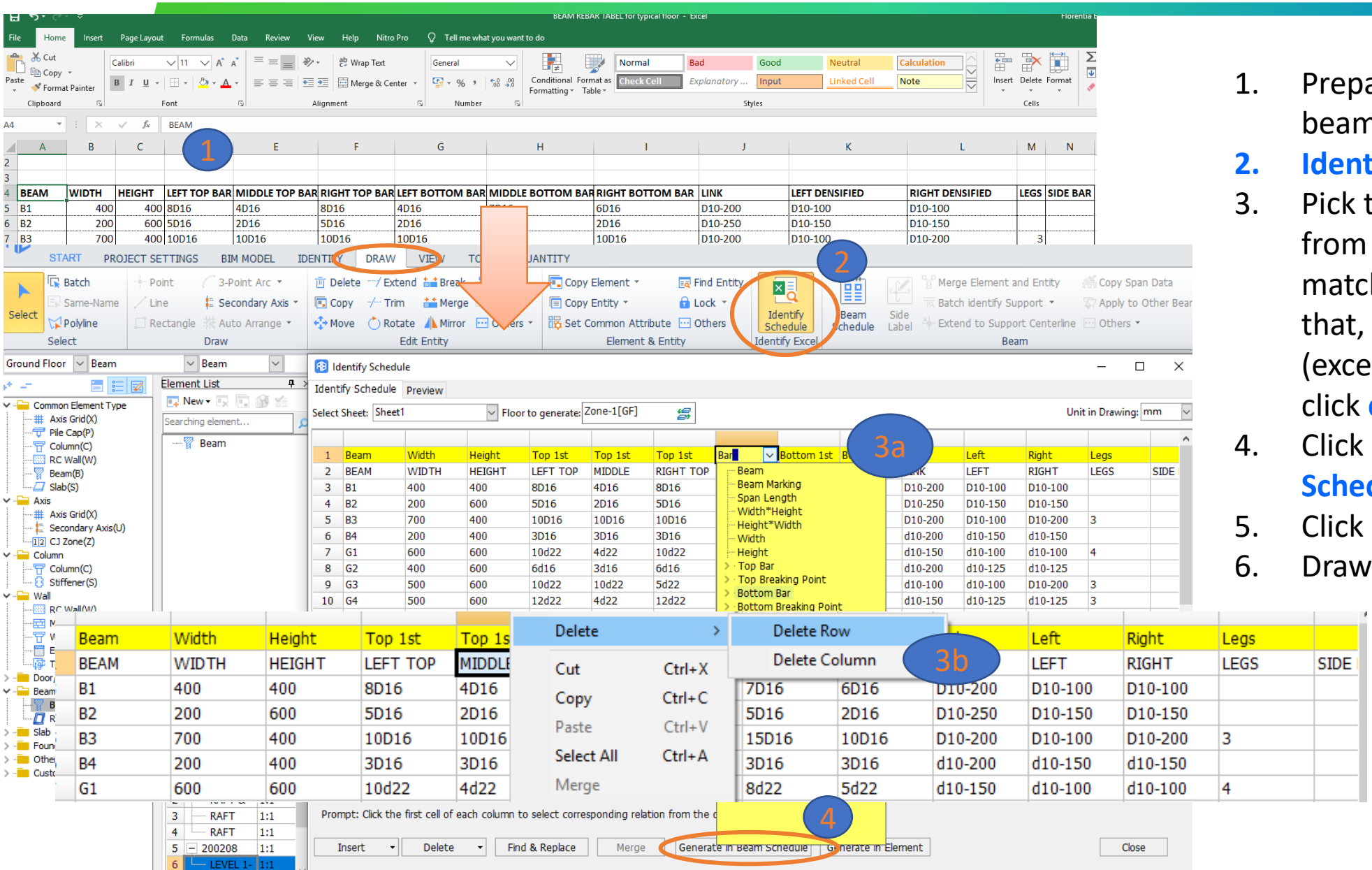
1. Prepare **Excel** table of the beam schedule information
2. **Identify Schedule**
3. Pick the **schedule heading** from the drop down list to match excel data. After that, right click on **2nd row** (excel heading text), and click **delete row**
4. Click **Generate in Beam Schedule**
5. Click **Sync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





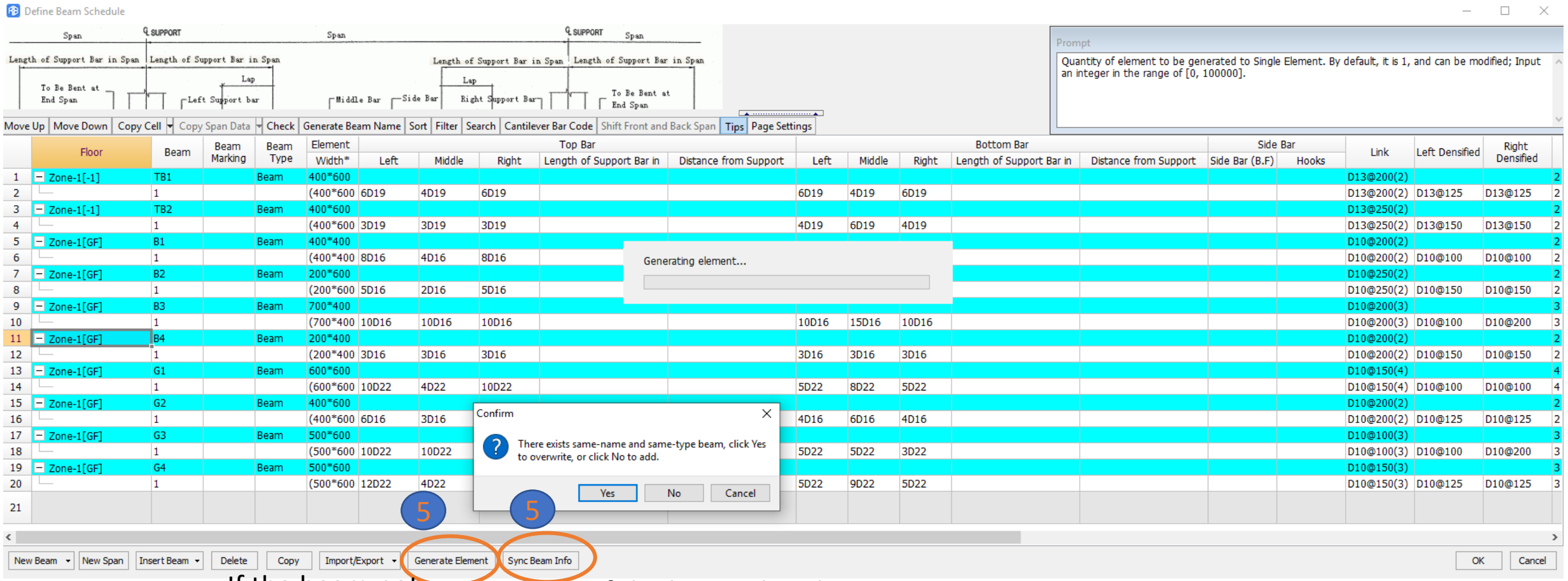


Beam – Generate Element



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**

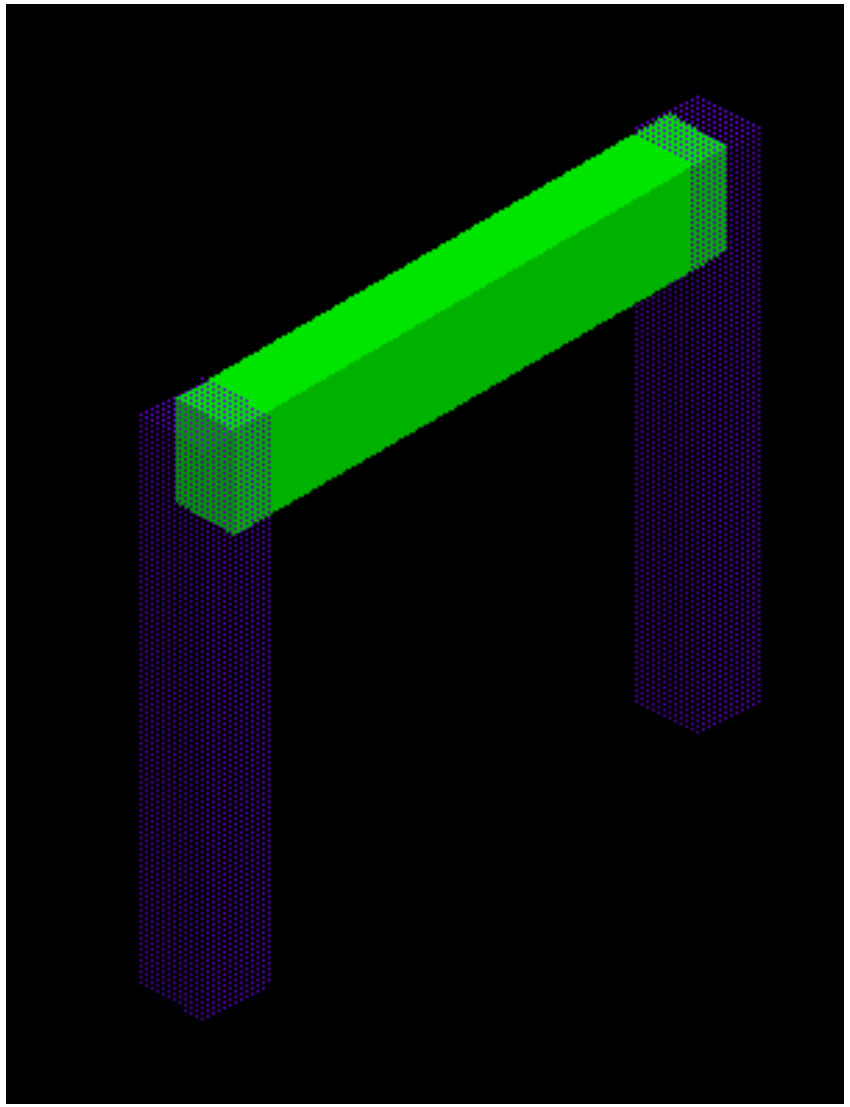
Beam – Generate Element



	Floor	Beam	Beam Marking	Beam Type	Element Width*	Top Bar Left	Top Bar Middle	Top Bar Right	Top Bar Length of Support Bar in	Top Bar Distance from Support	Bottom Bar Left	Bottom Bar Middle	Bottom Bar Right	Bottom Bar Length of Support Bar in	Bottom Bar Distance from Support	Side Bar Side Bar (B.F)	Side Bar Hooks	Link	Left Densified	Right Densified	
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																					

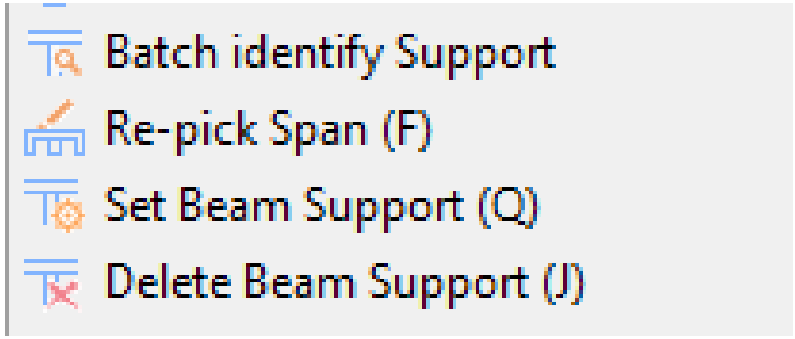
If the beam not modelled yet

If the beam already modelled

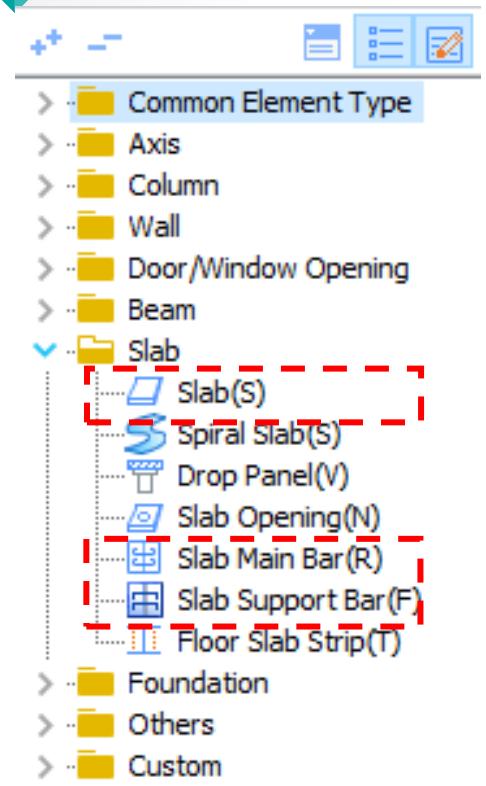


1. Beam shall find support from:
   a) Column @ lower floor
   b) Wall @ lower floor
   c) Beam with larger size
   d) Beam with same size
   e) Foundation
   f) Slab

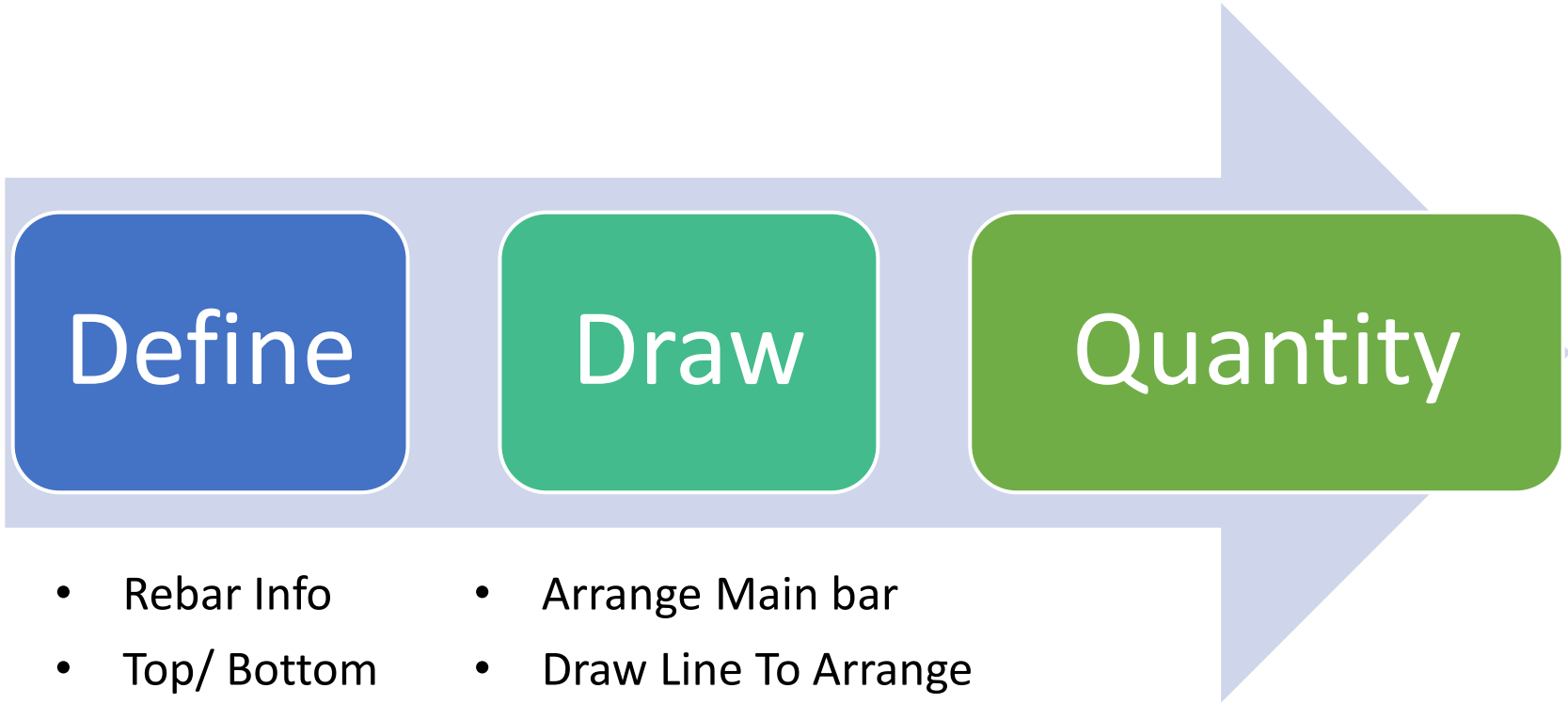
2. To find support, right click selected beam



Area Type



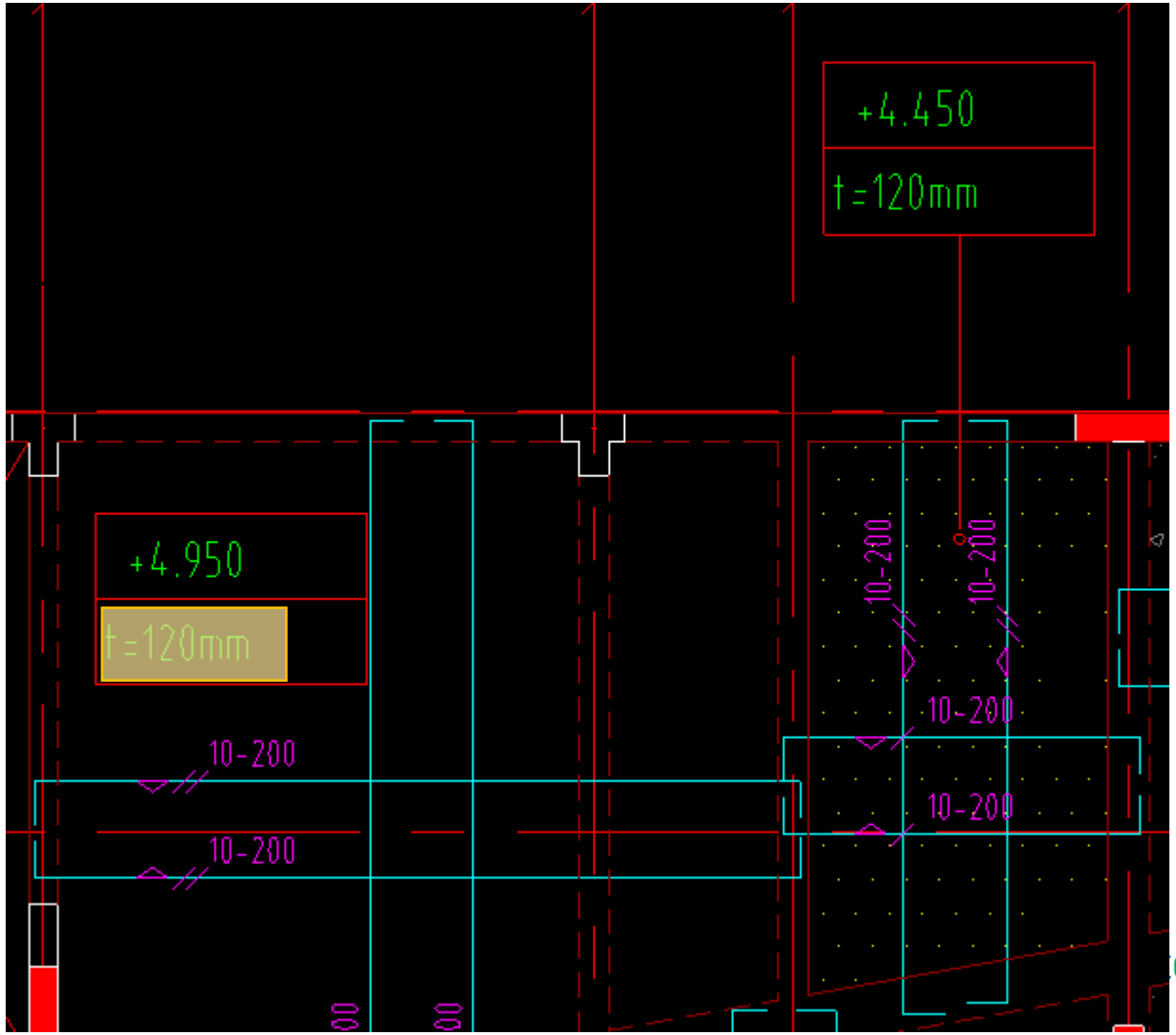
Slab

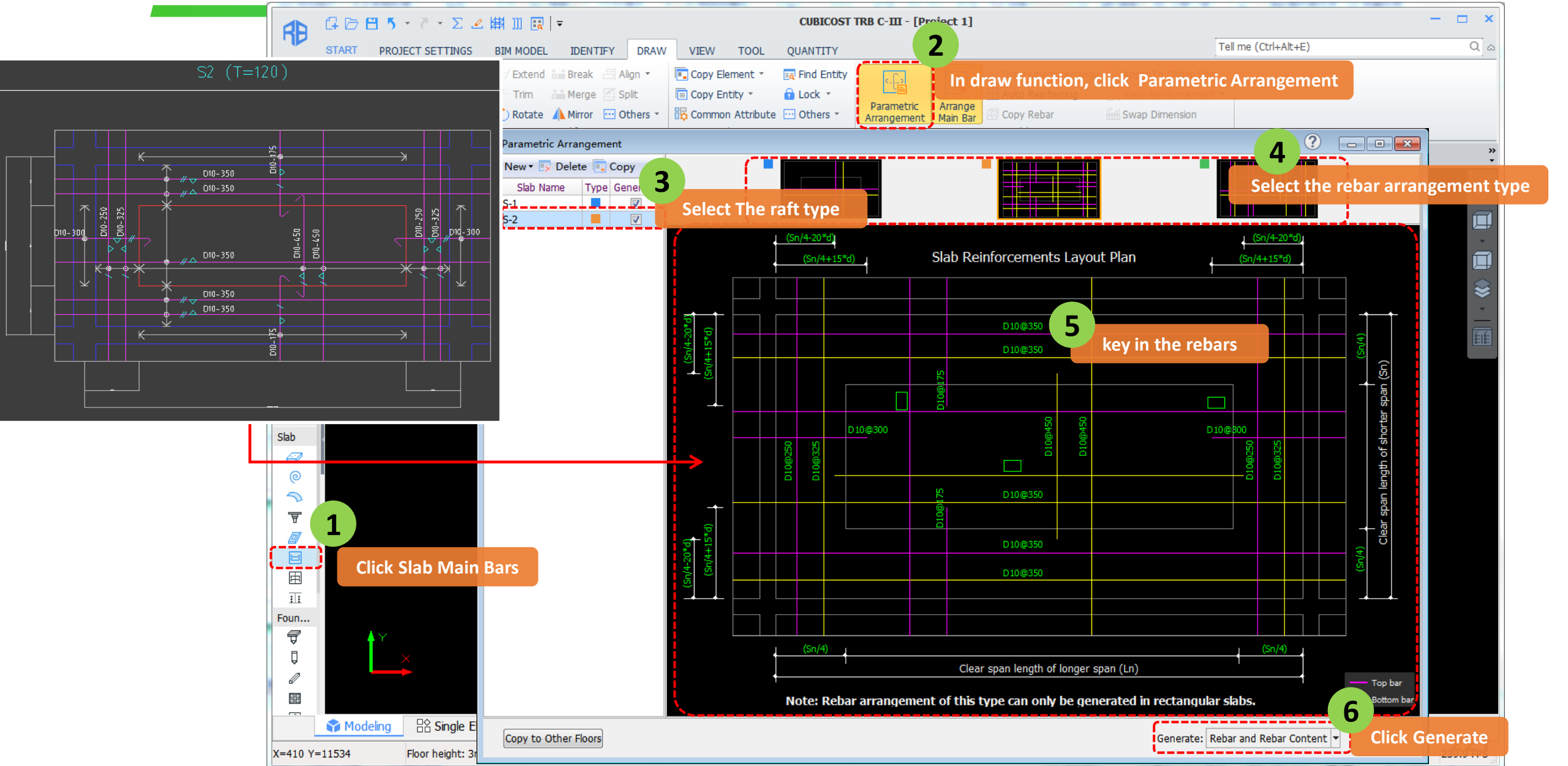

Define
Draw
Quantity
• Rebar Info
• Top/ Bottom
• Arrange Main bar
• Draw Line To Arrange

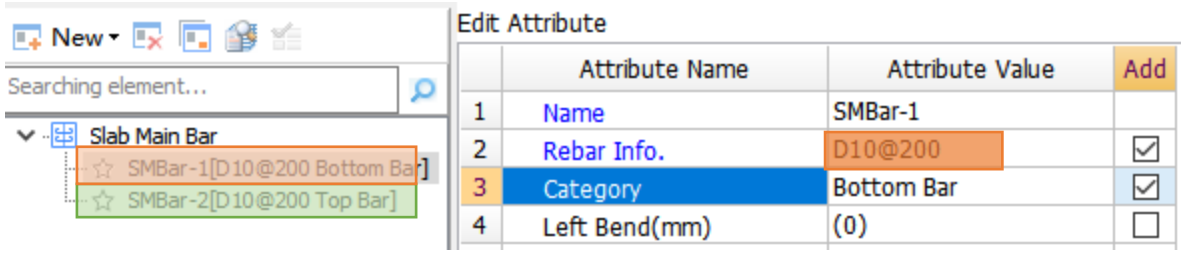
From TASC

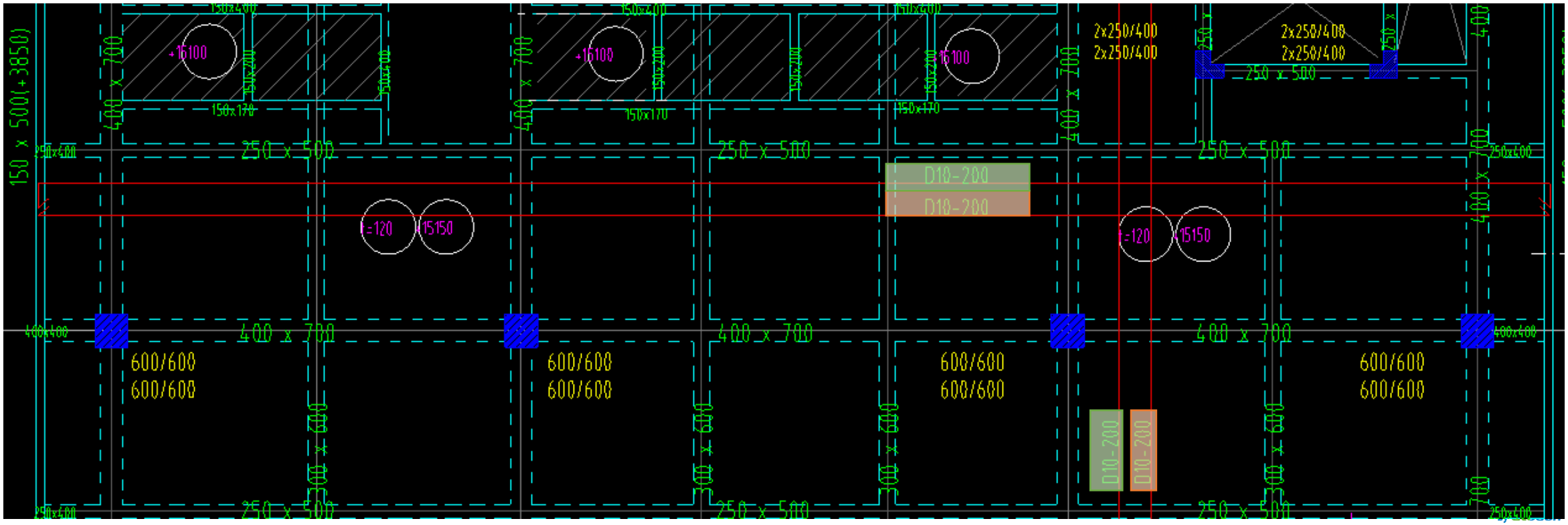
Edit Attribute

	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		



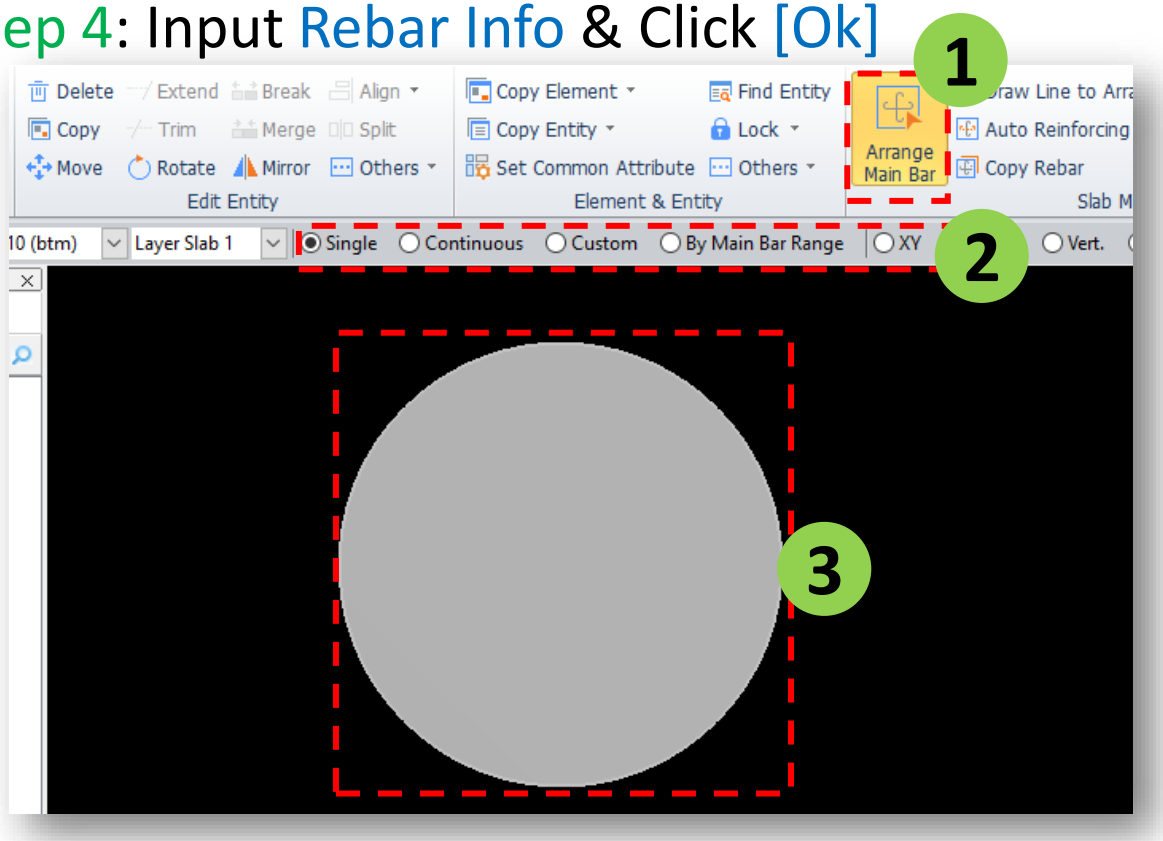

S2 (T=120)
CUBICOST TRB C-III - [Project 1]
START
PROJECT SETTINGS
BIM MODEL
IDENTIFY
DRAW
VIEW
TOOL
QUANTITY
Tell me (Ctrl+Alt+E)
Extend
Break
Align
Trim
Merge
Split
Rotate
Mirror
Others
Copy Element
Copy Entity
Common Attribute
Find Entity
Lock
Others
Parametric Arrangement
Arrange Main Bar
Copy Rebar
Swap Dimension
2
In draw function, click Parametric Arrangement
Parametric Arrangement
New
Delete
Copy
Slab Name
Type
S-1
S-2
3
Select The raft type
4
Select the rebar arrangement type
Slab Reinforcements Layout Plan
(Sn/4-20*d)
(Sn/4+15*d)
D10@350
D10@175
D10@300
D10@450
D10@250
D10@325
5
key in the rebars
(Sn/4)
Clear span length of shorter span (Sn)
Clear span length of longer span (Ln)
Note: Rebar arrangement of this type can only be generated in rectangular slabs.
Top bar
Bottom bar
6
Click Generate
Copy to Other Floors
Generate:
Rebar and Rebar Content
Slab
Foun...
1
Click Slab Main Bars
Modeling
Single E
X=410 Y=11534
Floor height: 3r

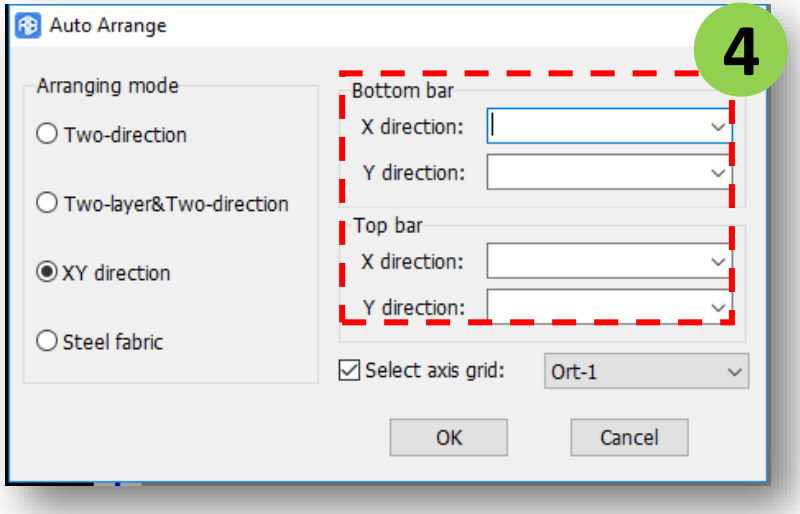

New
Searching element...
Slab Main Bar
SMBar-1[D10@200 Bottom Bar]
SMBar-2[D10@200 Top Bar]
Edit Attribute
Attribute Name
Attribute Value
Add
1 Name SMBar-1
2 Rebar Info. D10@200
3 Category Bottom Bar
4 Left Bend(mm) (0)


150 x 500(+3850)
400 x 700
250 x 500
600/600
600/600
D10-200
D10-200
2x250/400
2x250/400
2x250/400
2x250/400
D10-200
D10-200

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

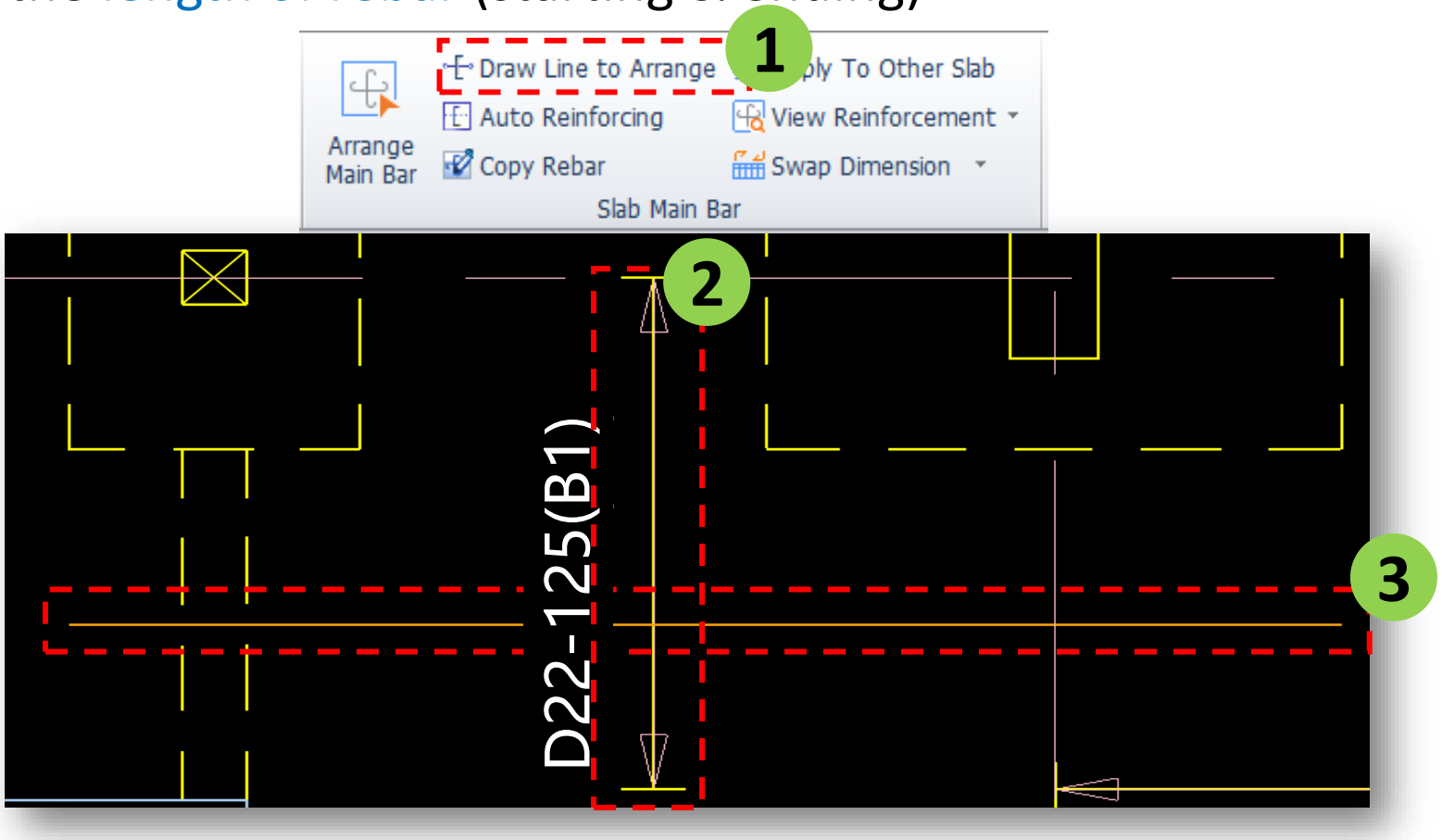
- Step 1: Tab {Draw}, Click [Arrange Main Bar]
- Step 2: Select XY & Single/Continuous
- Step 3(opt): Select Slab(s) & Right Click
- Step 4: Input Rebar Info & Click [Ok]

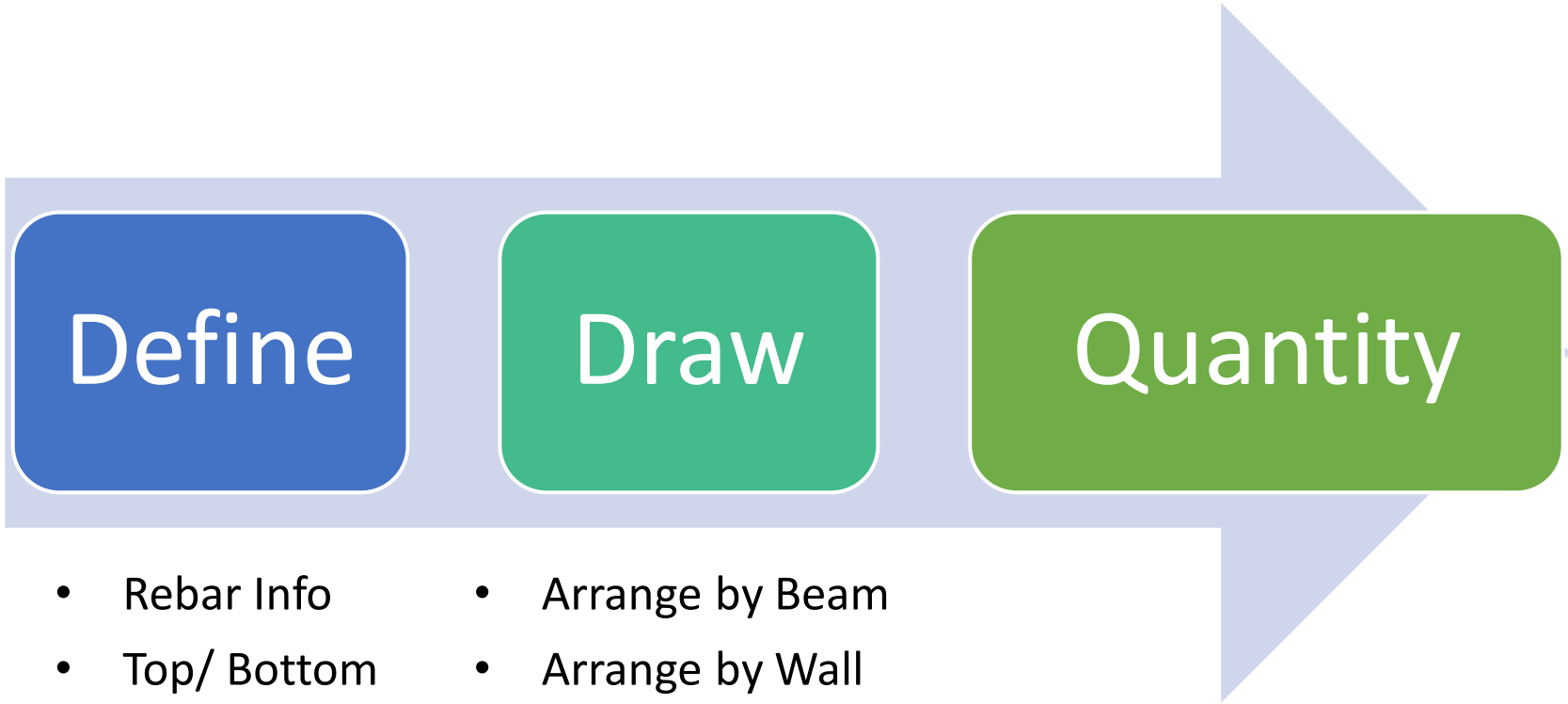




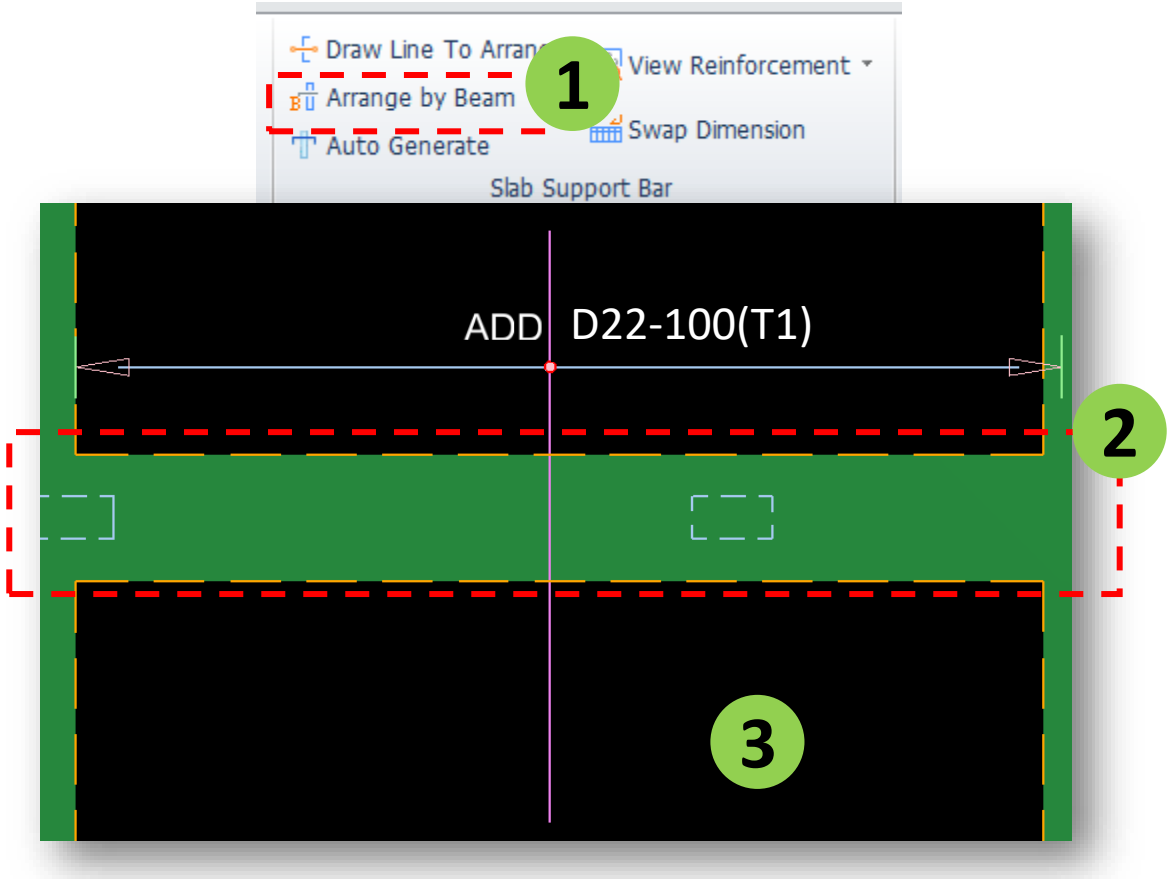
Draw Slab Main bar (Arrange according to the given bar length)

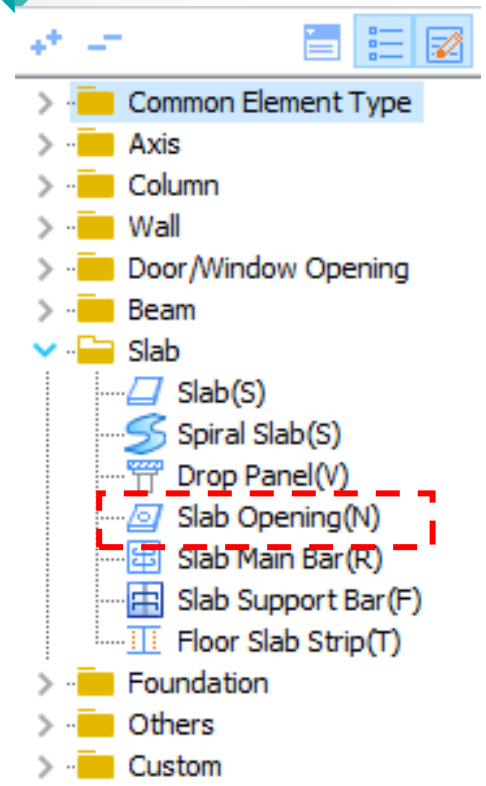
- Step 1: Tab {Draw}, Click [Draw Line to Arrange]
- Step 2: Click the range of rebar *with arrow (starting & ending)
- Step 3: Click the length of rebar (starting & ending)




Define
Draw
Quantity
• Rebar Info
• Top/ Bottom
• Arrange by Beam
• Arrange by Wall
• Arrange by Slab Edge

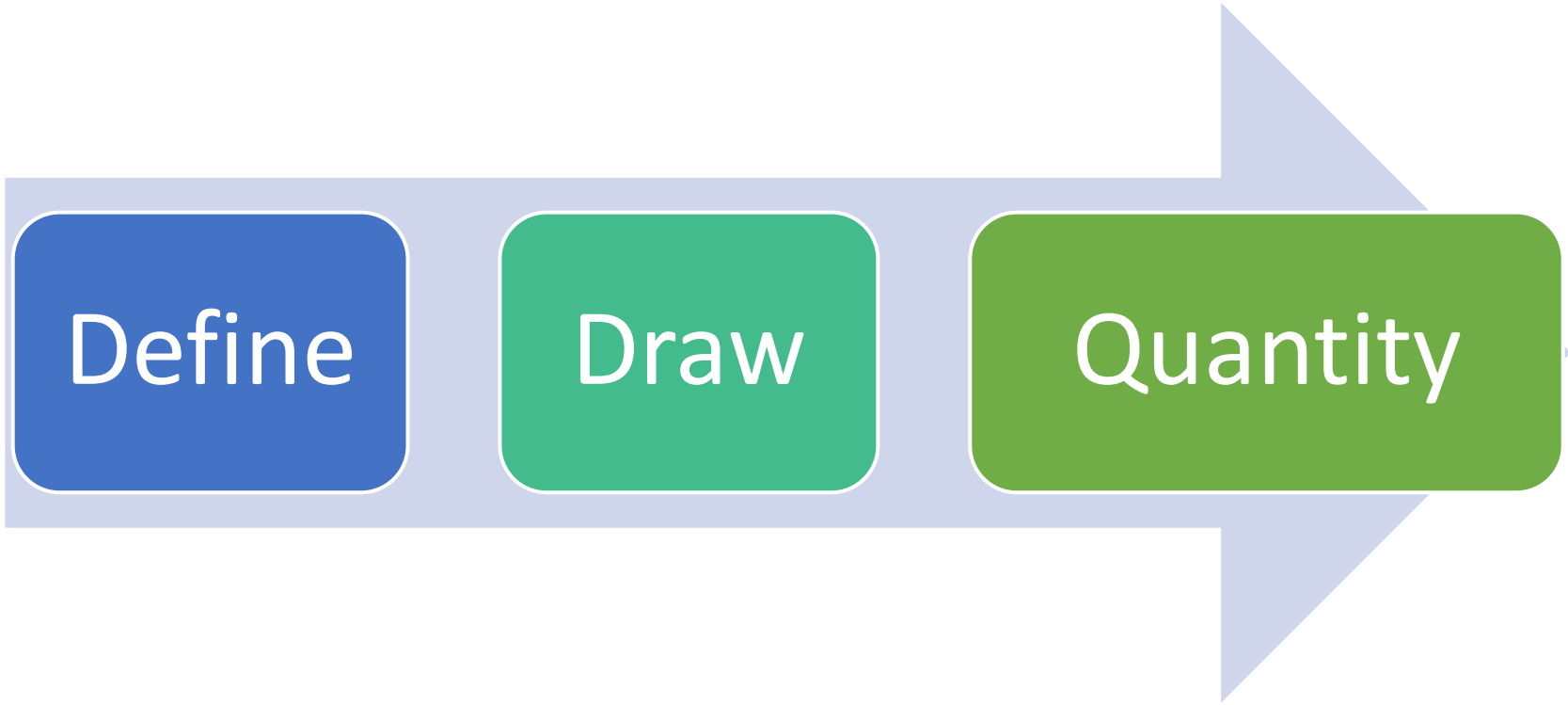
- Step 1: Tab {Draw}, Click [Arrange by Beam]
- Step 2: Click the Beam
- Step 3(opt): Click on the Left Side of the Beam only if both sides are different length

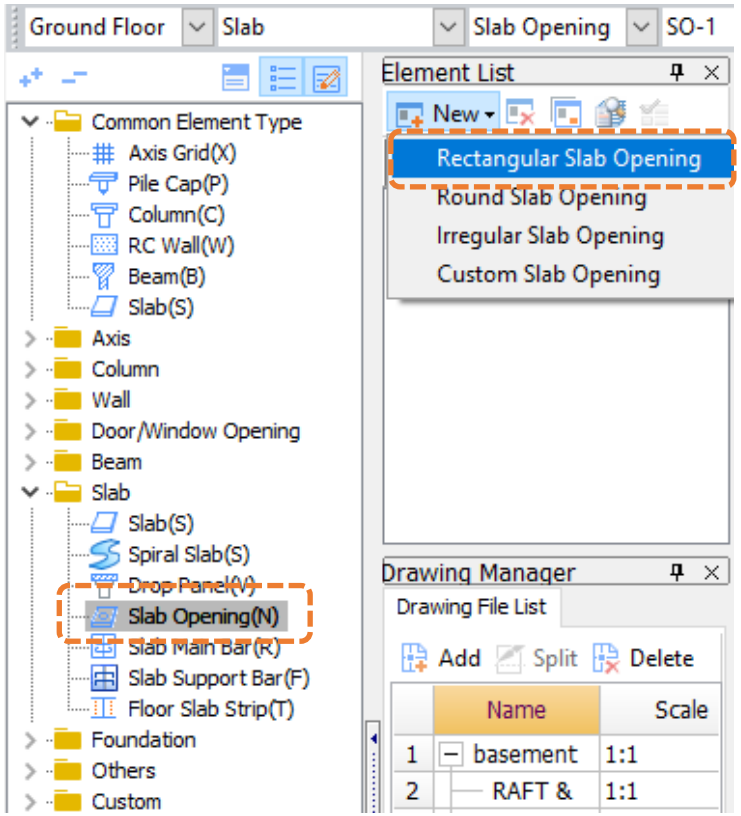


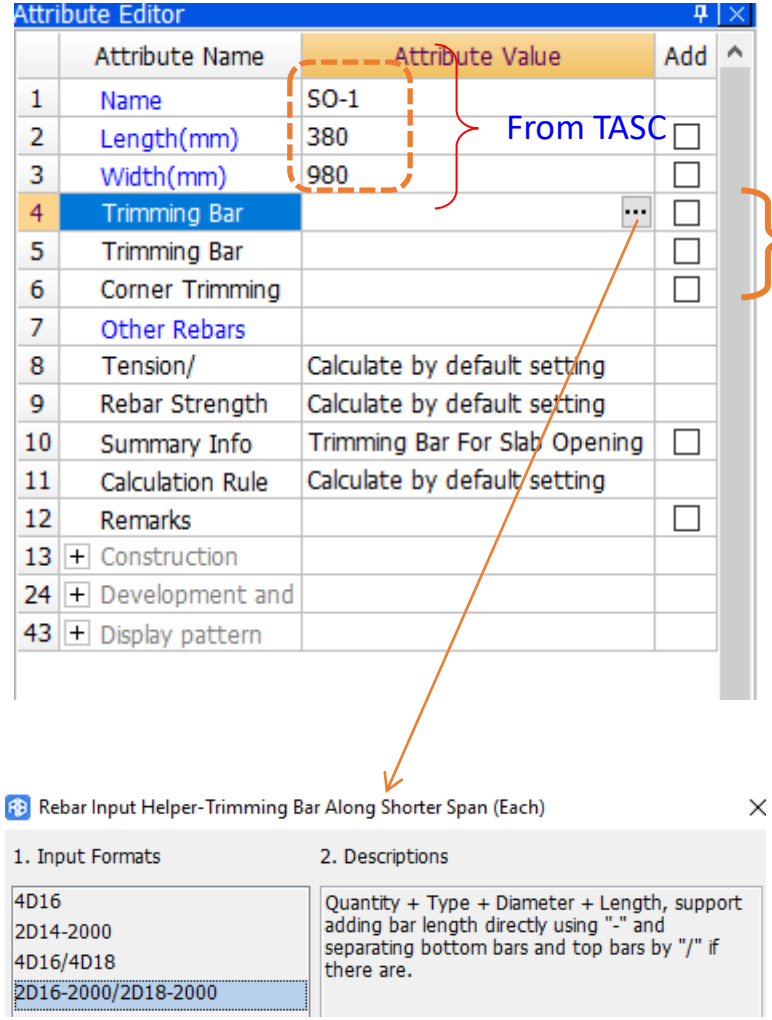


Area Type

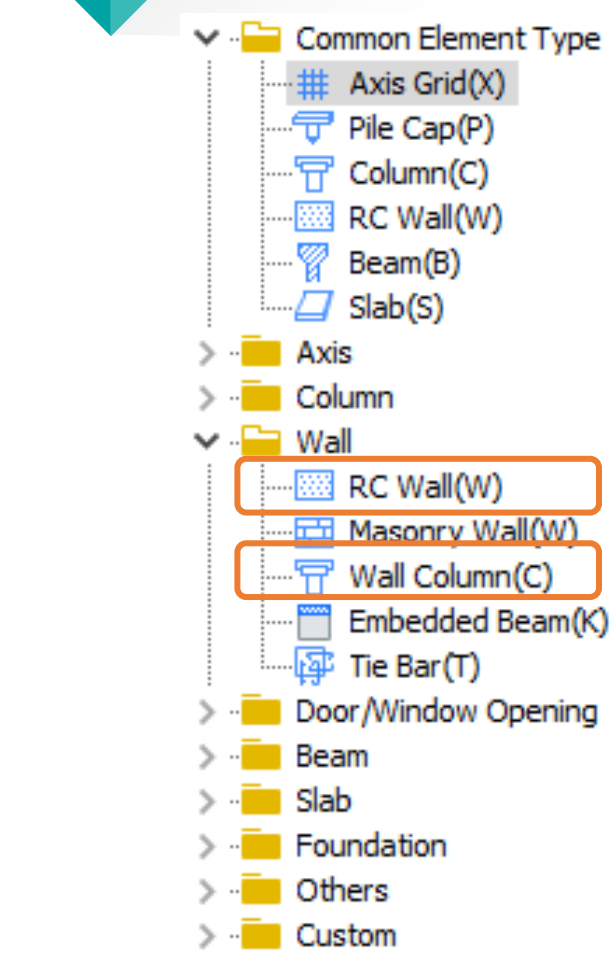
Slab Opening


Define
Draw
Quantity

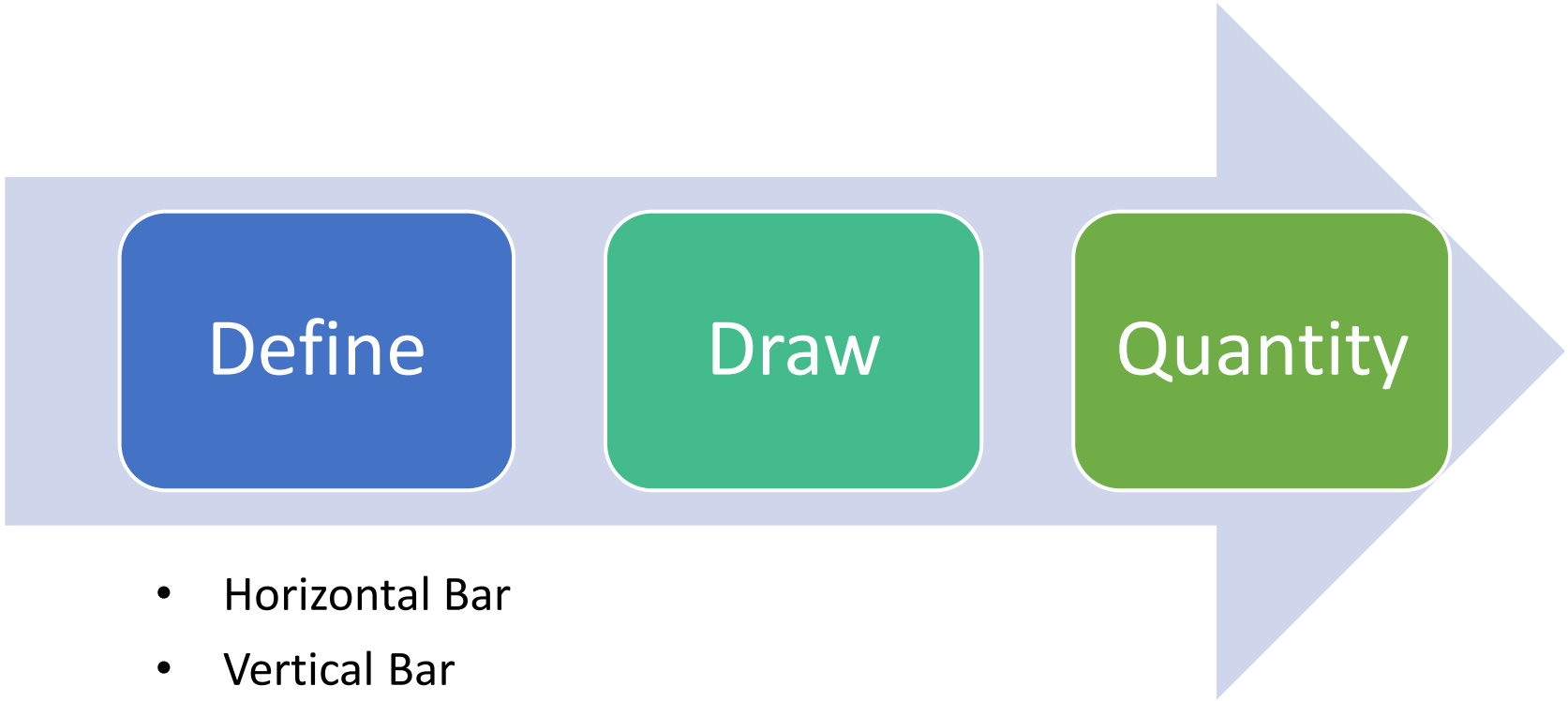

Ground Floor
Slab
Slab Opening
SO-1
Element List
New
Rectangular Slab Opening
Round Slab Opening
Irregular Slab Opening
Custom Slab Opening
Common Element Type
Axis Grid(X)
Pile Cap(P)
Column(C)
RC Wall(W)
Beam(B)
Slab(S)
Axis
Column
Wall
Door/Window Opening
Beam
Slab
Slab(S)
Spiral Slab(S)
Drop Panel(V)
Slab Opening(N)
Slab Main Bar(R)
Slab Support Bar(F)
Floor Slab Strip(T)
Foundation
Others
Custom
Drawing Manager
Drawing File List
Add
Split
Delete
Name
Scale
1 basement 1:1
2 RAFT & 1:1


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

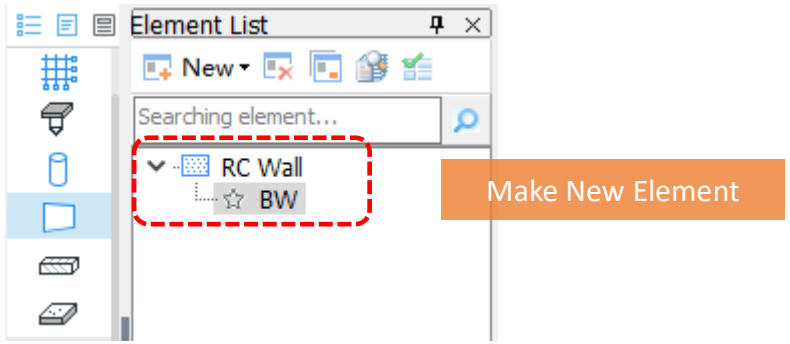
Linear Type



Wall



- Horizontal Bar
- Vertical Bar
- Hooks

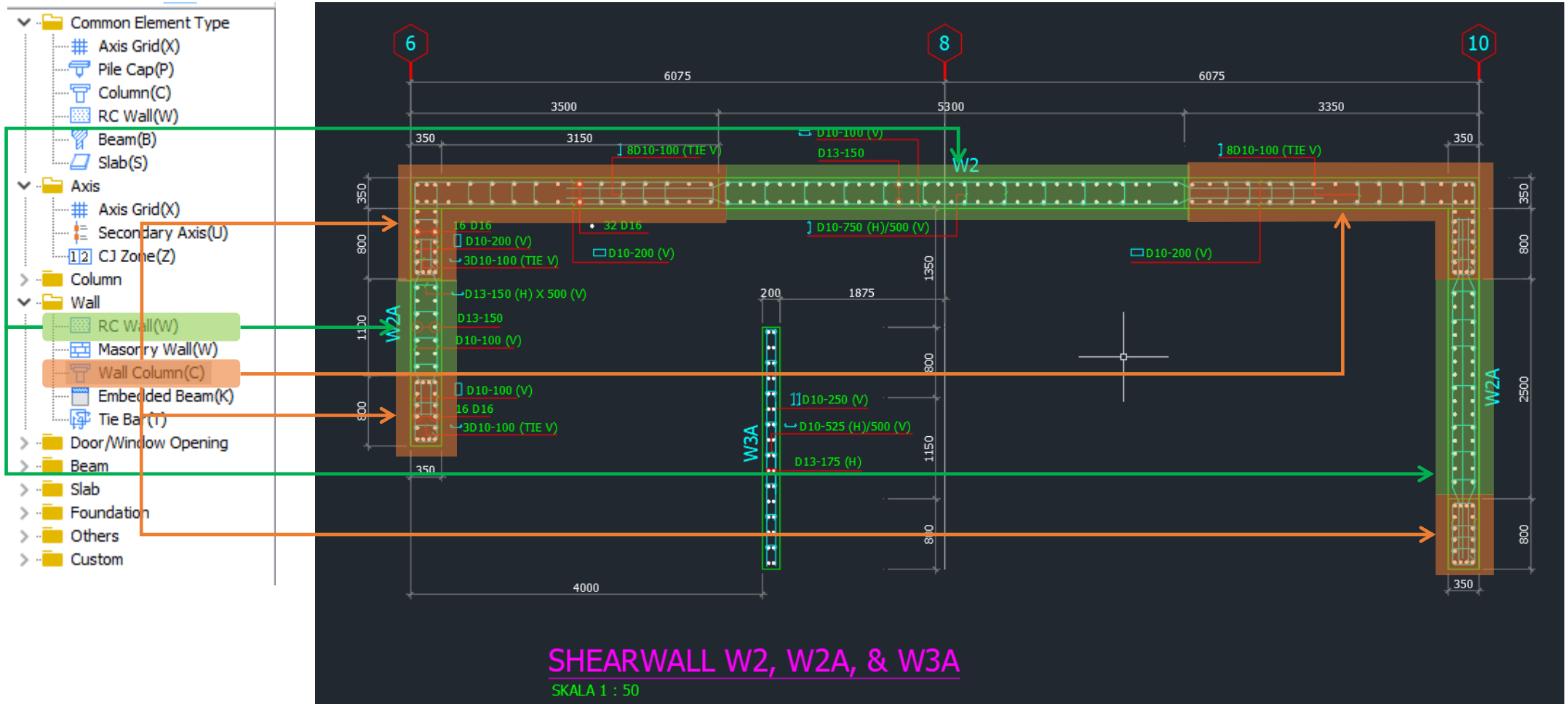


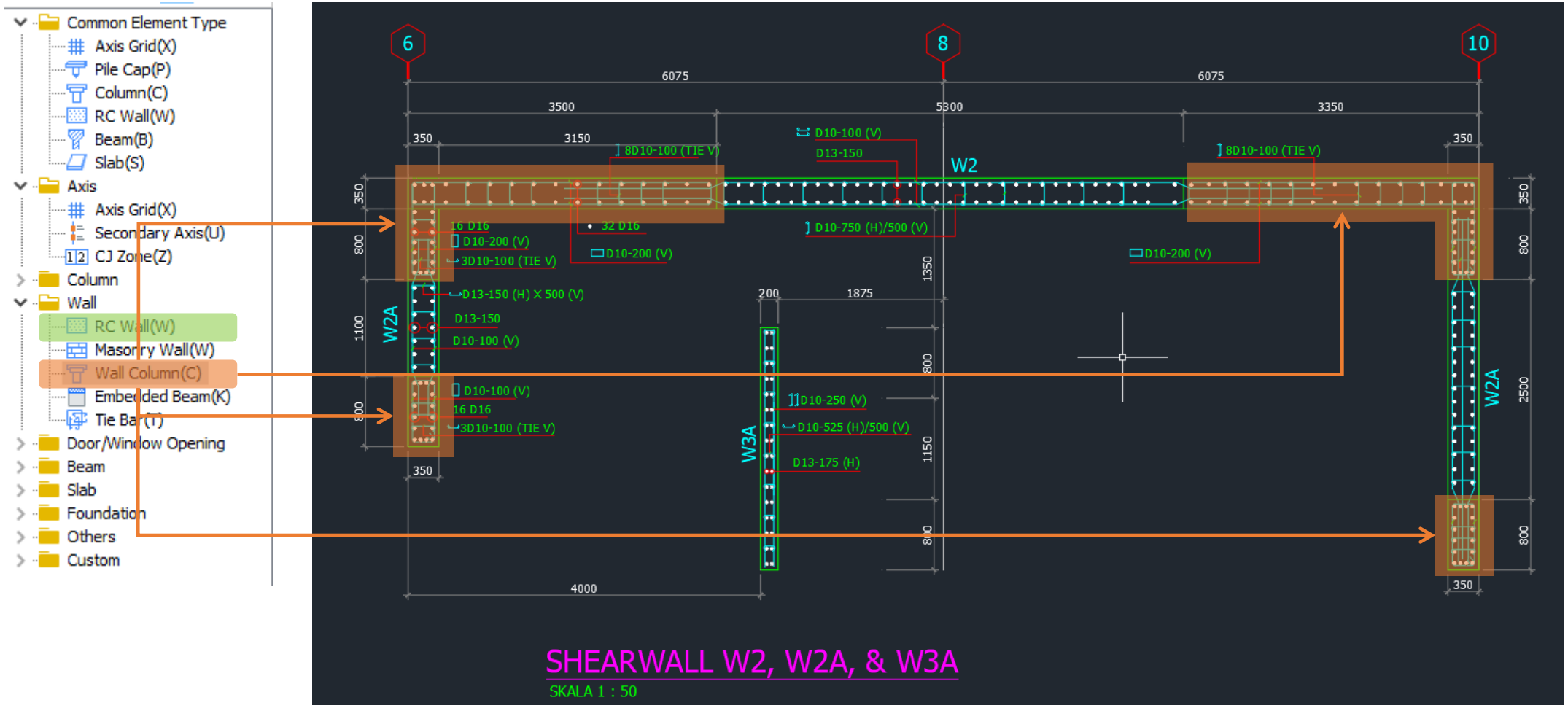
Make New Element

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	

From TASC


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
6
8
10
6075
6075
3500
5300
3350
350
3150
350
8D10-100 (TIE V)
D10-100 (V)
D13-150
W2
8D10-100 (TIE V)
16 D16
D10-200 (V)
3D10-100 (TIE V)
32 D16
D10-200 (V)
D10-750 (H)/500 (V)
D10-200 (V)
D13-150 (H) X 500 (V)
D13-150
D10-100 (V)
W2A
200
1875
D10-100 (V)
16 D16
3D10-100 (TIE V)
D10-250 (V)
D10-525 (H)/500 (V)
W3A
D13-175 (H)
W2A
4000
SHEARWALL W2, W2A, & W3A
SKALA 1 : 50


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
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8
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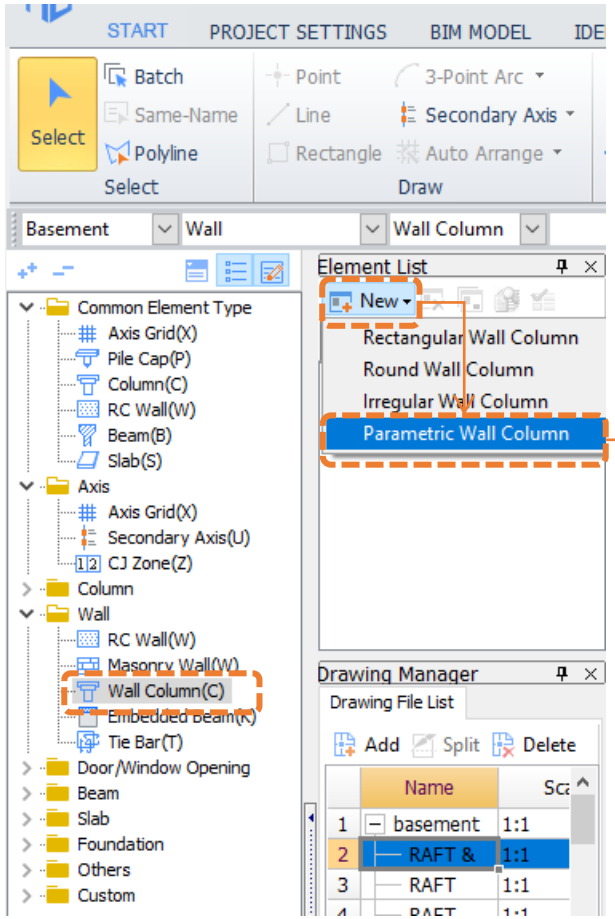
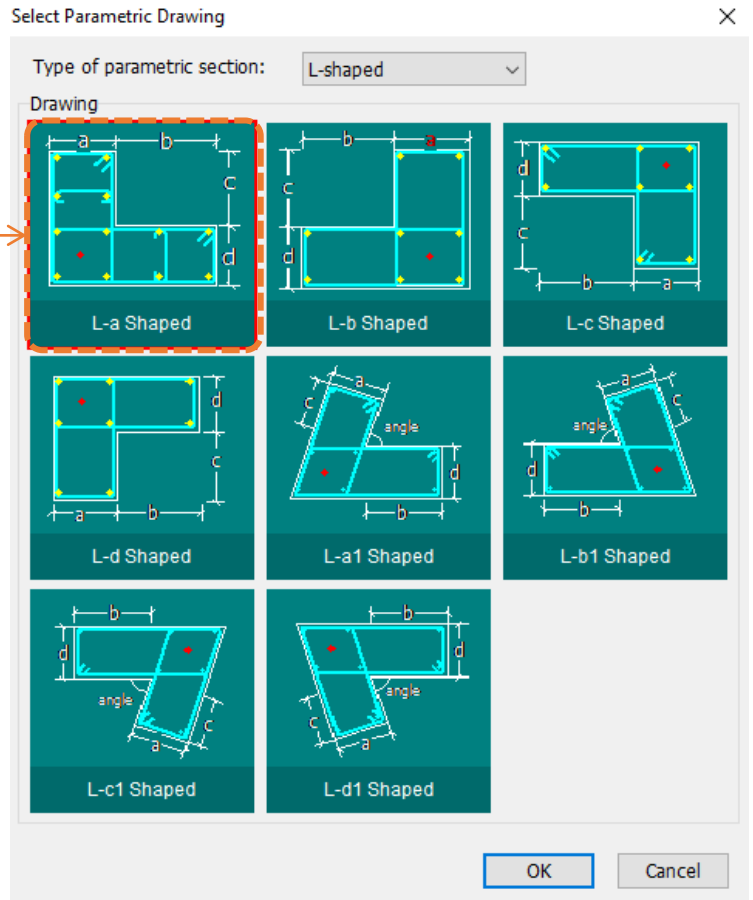
6075
6075
3500
5300
3350
350
3150
350
8D10-100 (TIE V)
D10-100 (V)
D13-150
W2
8D10-100 (TIE V)
16 D16
D10-200 (V)
3D10-100 (TIE V)
32 D16
D10-200 (V)
D10-750 (H)/500 (V)
D10-200 (V)
D13-150 (H) X 500 (V)
D13-150
D10-100 (V)
W2A
200
1875
D10-100 (V)
16 D16
3D10-100 (TIE V)
D10-250 (V)
D10-525 (H)/500 (V)
W3A
D13-175 (H)
W2A
4000
SHEARWALL W2, W2A, & W3A
SKALA 1 : 50


START
PROJECT SETTINGS
BIM MODEL
IDE
Select
Batch
Same-Name
Polyline
Point
Line
Rectangle
3-Point Arc
Secondary Axis
Auto Arrange
Select
Draw
Basement
Wall
Wall Column
Element List
New
Rectangular Wall Column
Round Wall Column
Irregular Wall Column
Parametric Wall Column
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
Drawing Manager
Drawing File List
Add
Split
Delete
Name
1 basement 1:1
2 RAFT & 1:1
3 RAFT 1:1


Select Parametric Drawing
Type of parametric section:
L-shaped
Drawing
L-a Shaped
L-b Shaped
L-c Shaped
L-d Shaped
L-a1 Shaped
L-b1 Shaped
L-c1 Shaped
L-d1 Shaped
OK
Cancel

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		

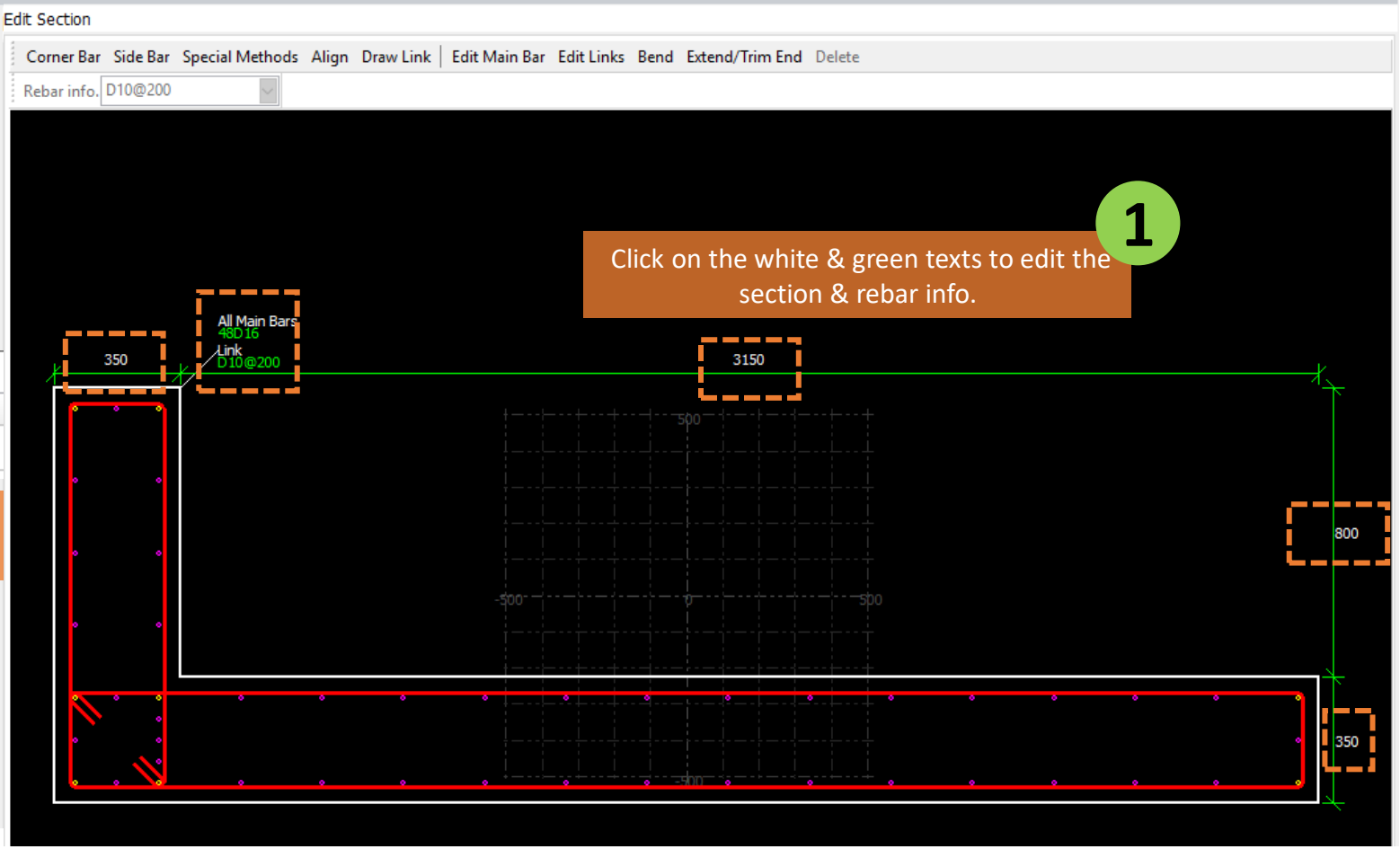
Other Link Types

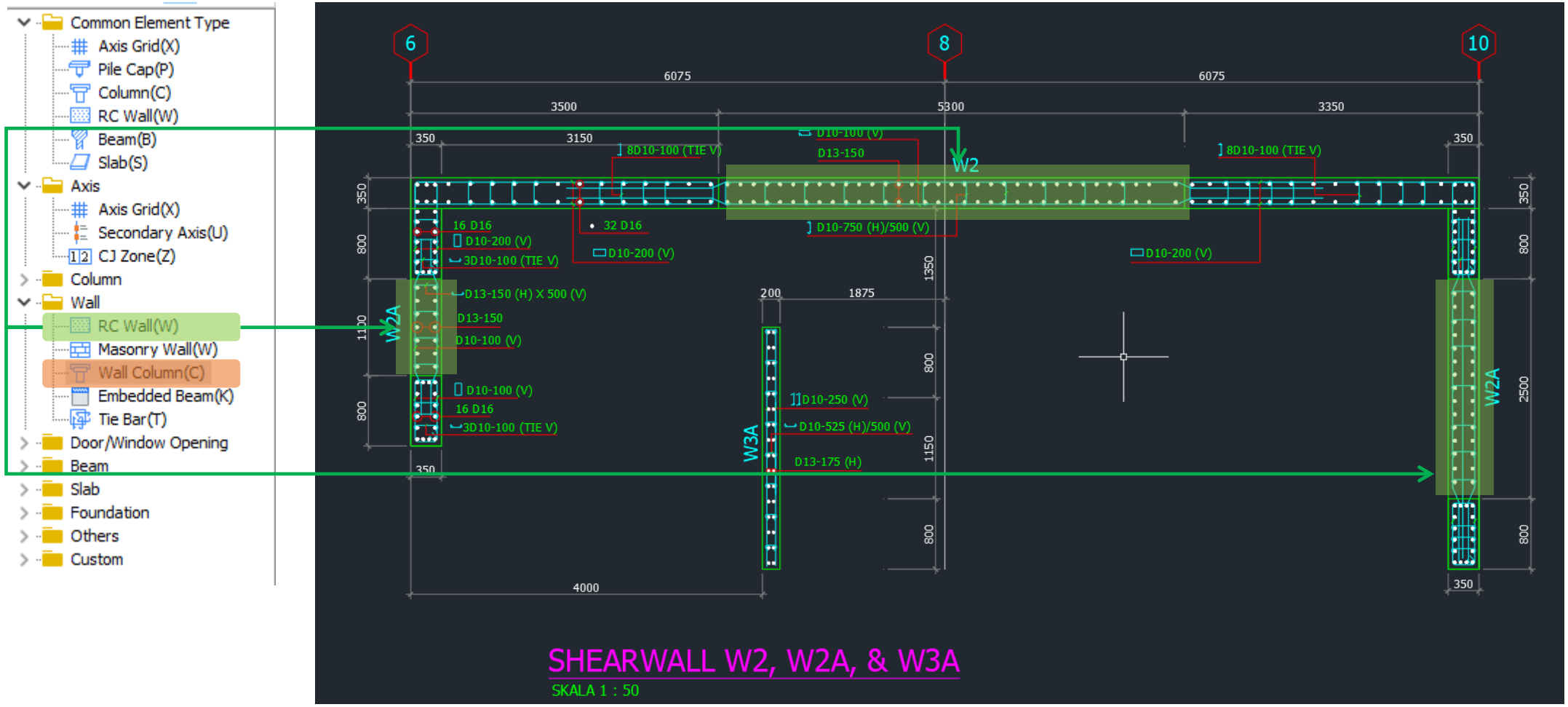
	Link	Link information	Shape	Remarks
1	485	11D13@100	270	

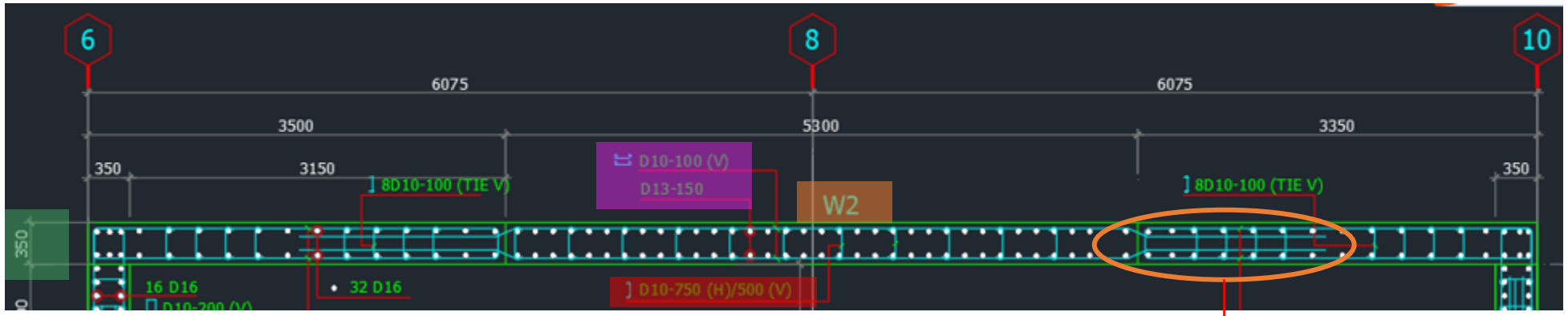
14	Summary Info	Wall Column	☐
15	Cover Thickness(mm)	(40)	☐
16	Top Densified Range(	(max(Hn/6,hc(D),450))	☐
17	Bottom Densified	(max(Hn/6,hc(D),450))	☐
18	Dowel Bar Structure	Set Dowel Bar	☐
19	Dowel Bar Information		☐
20	Calculation Rule	Calculate by default setting	
21	Lap Setting	Calculate by default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




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
6
8
10
6075
6075
3500
5300
3350
350
3150
350
8D10-100 (TIE V)
D10-100 (V)
D13-150
W2
8D10-100 (TIE V)
16 D16
D10-200 (V)
3D10-100 (TIE V)
32 D16
D10-200 (V)
D10-750 (H)/500 (V)
D10-200 (V)
D13-150 (H) X 500 (V)
D13-150
D10-100 (V)
W2A
200
1875
D10-100 (V)
16 D16
3D10-100 (TIE V)
D10-250 (V)
D10-525 (H)/500 (V)
W3A
D13-175 (H)
W2A
4000
SHEARWALL W2, W2A, & W3A
SKALA 1 : 50



New

Searching element...

- RC Wall
  - BW
  - W2
  - W2A
  - W3A

Edit Attribute

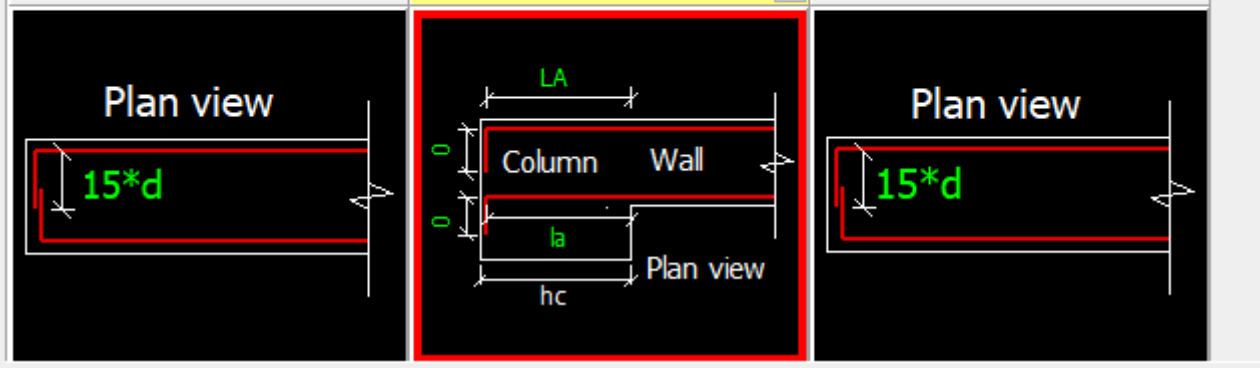
	Attribute Name	Attribute Value	Add
1	Name	W2	
2	Category	Structural Wall	☐
3	Material	In-Situ	☐
4	Thickness(mm)	350	☐
5	Axis from Left Side(mm)	(175)	☐
6	Horizontal Distribution Bar	(2)D10@100	☐
7	Vertical Distribution Bar	(2)D13@150	☐
8	Binder		☐
9	Hooks	D10@750*500	☐
10	Additional Horizontal Bar		☐
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

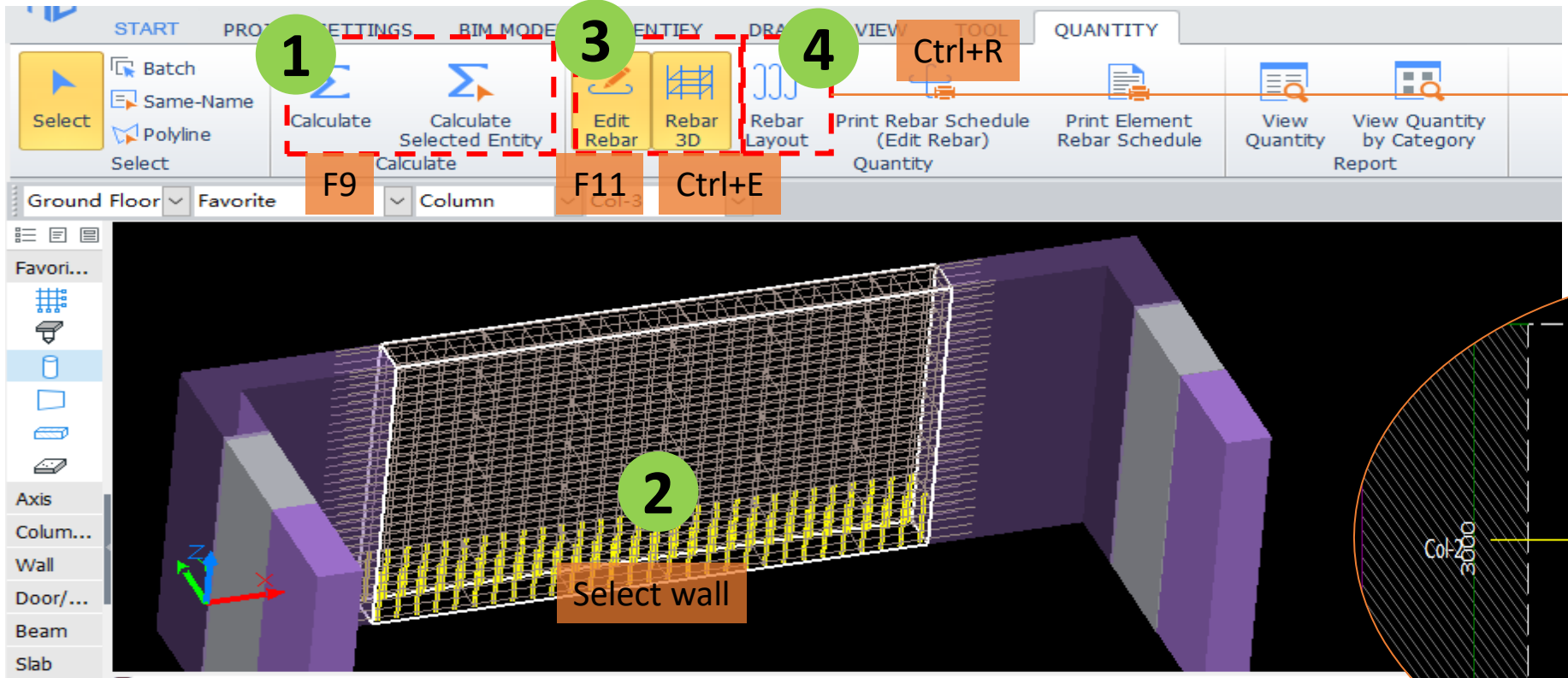
End of wall

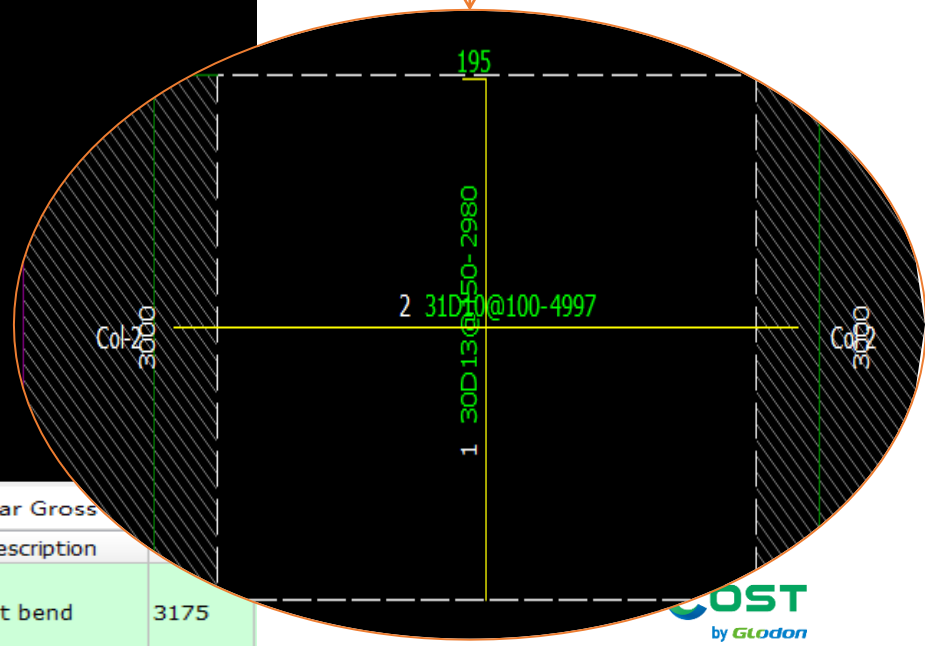
End	With column	With opening



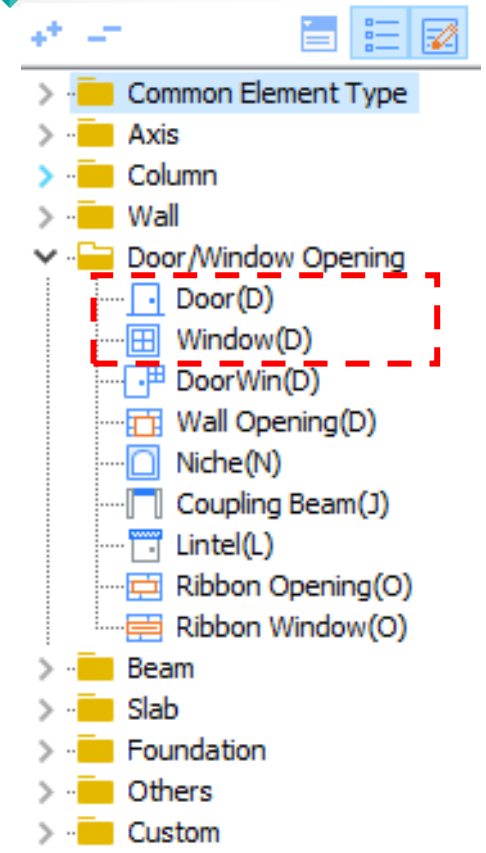
In project setting→calculation rule, arrange end of wall with column to match the detail

- 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

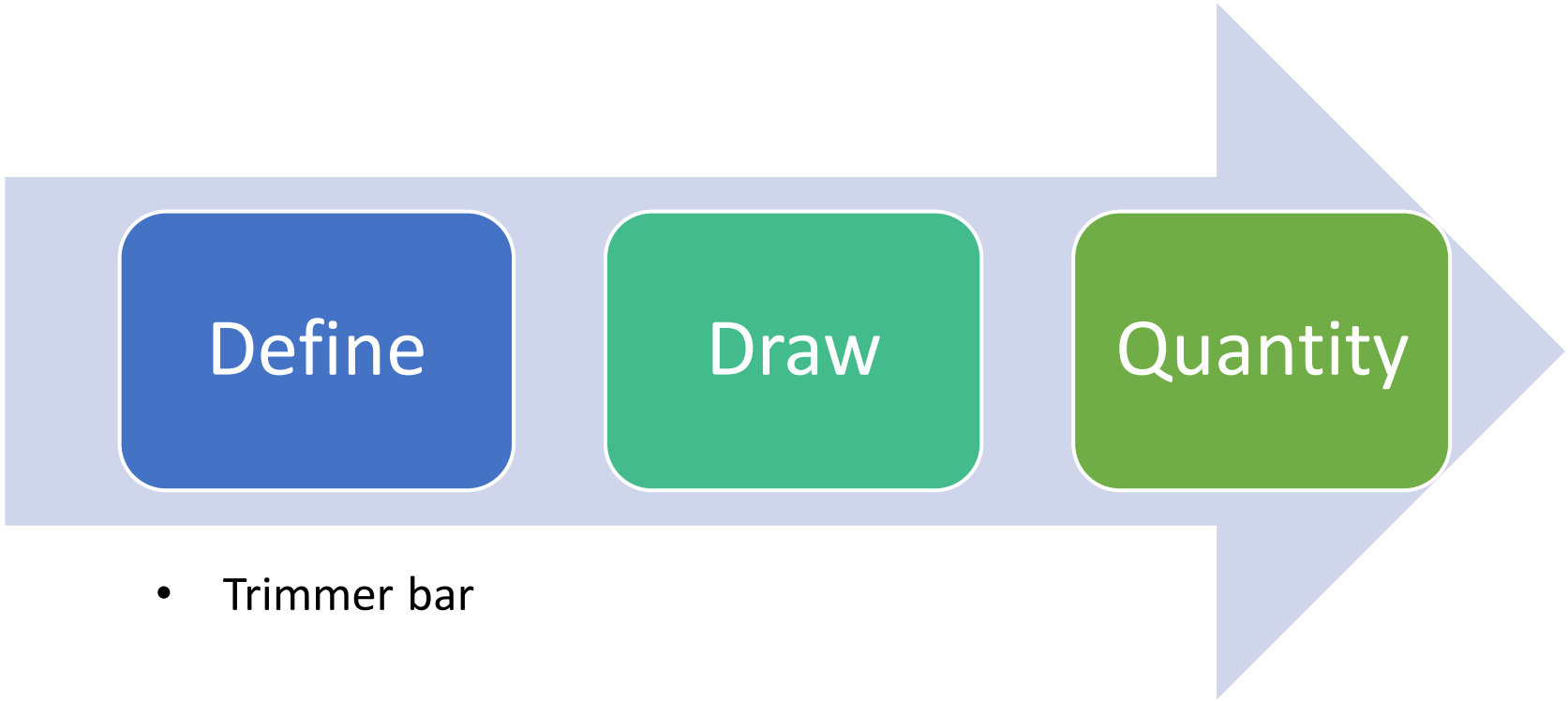




Point Type



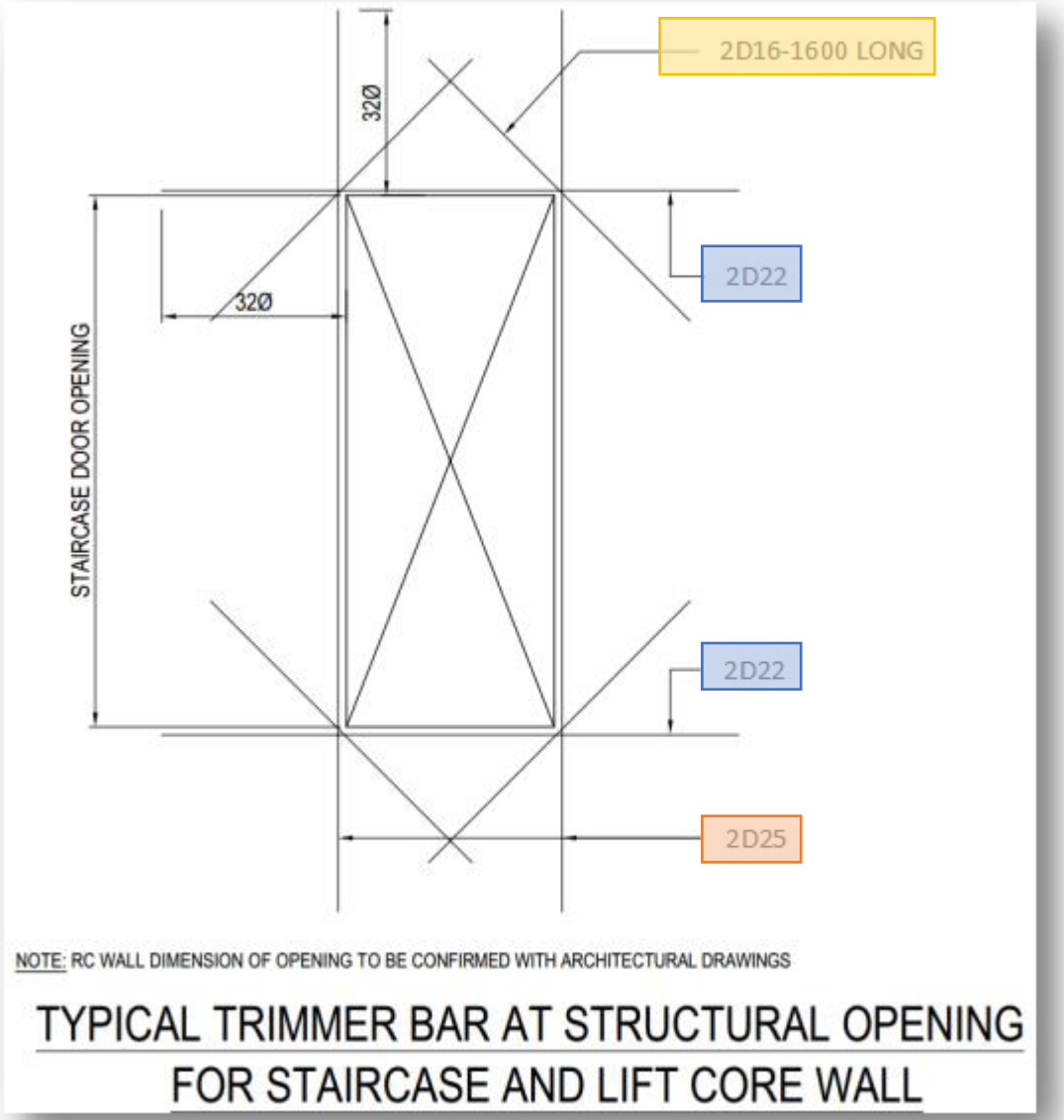
Door/ Window



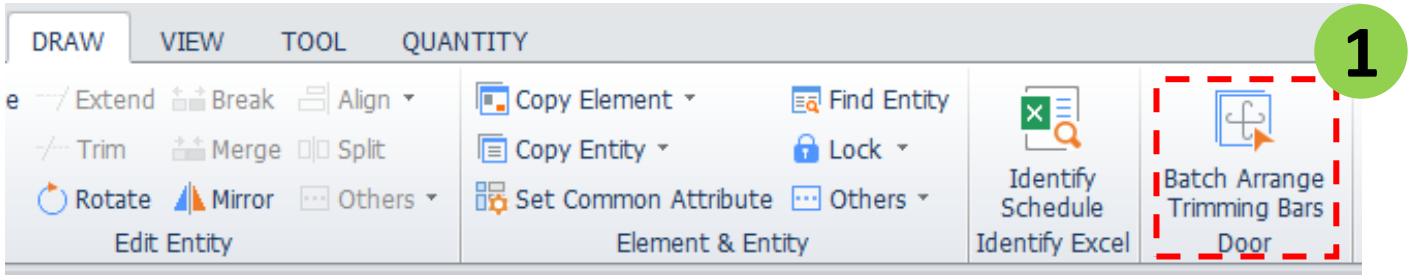
- Trimmer bar

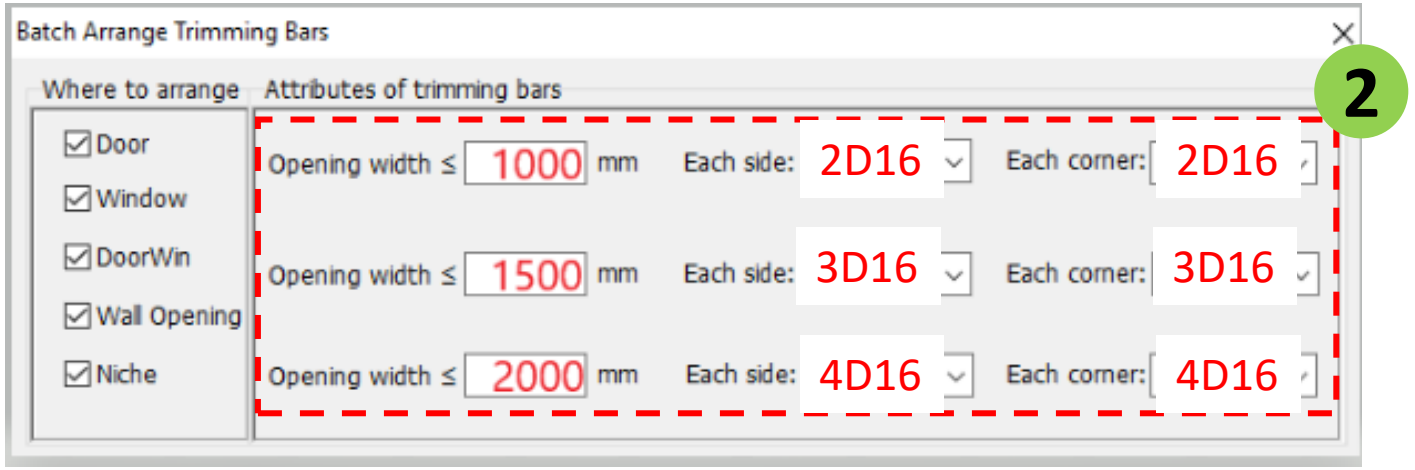
Edit Attribute

	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		

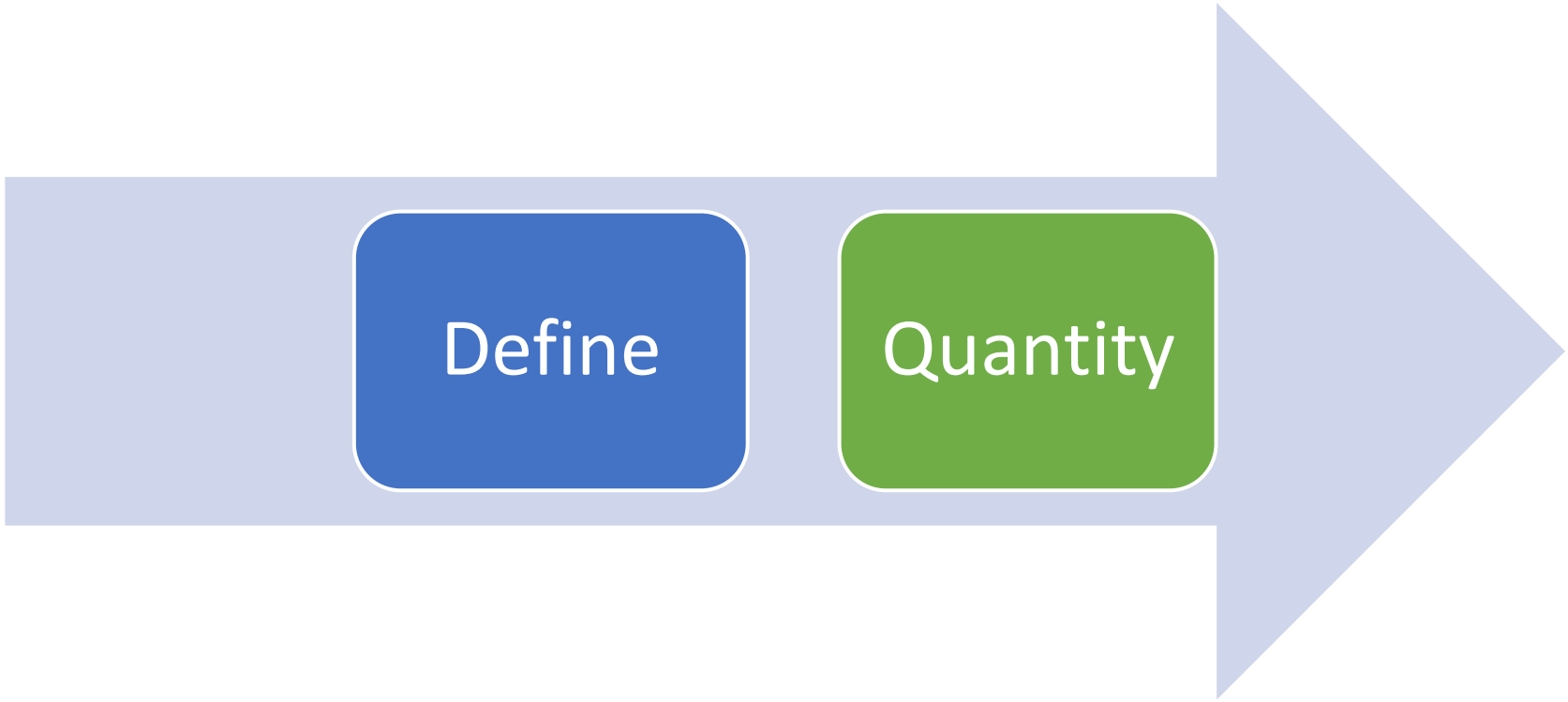


- Step 1: Tab {Draw}, Select [Batch Arrange Trimming Bars]
- Step 2: Fill in the Opening Width & Rebar for Side & Corner

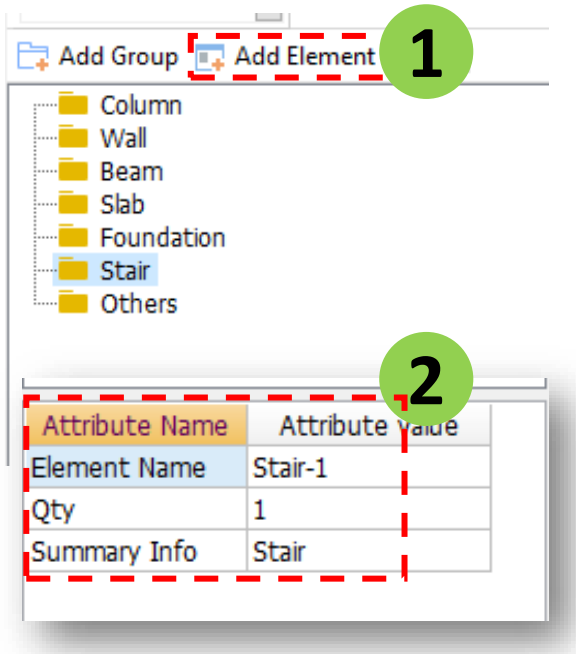


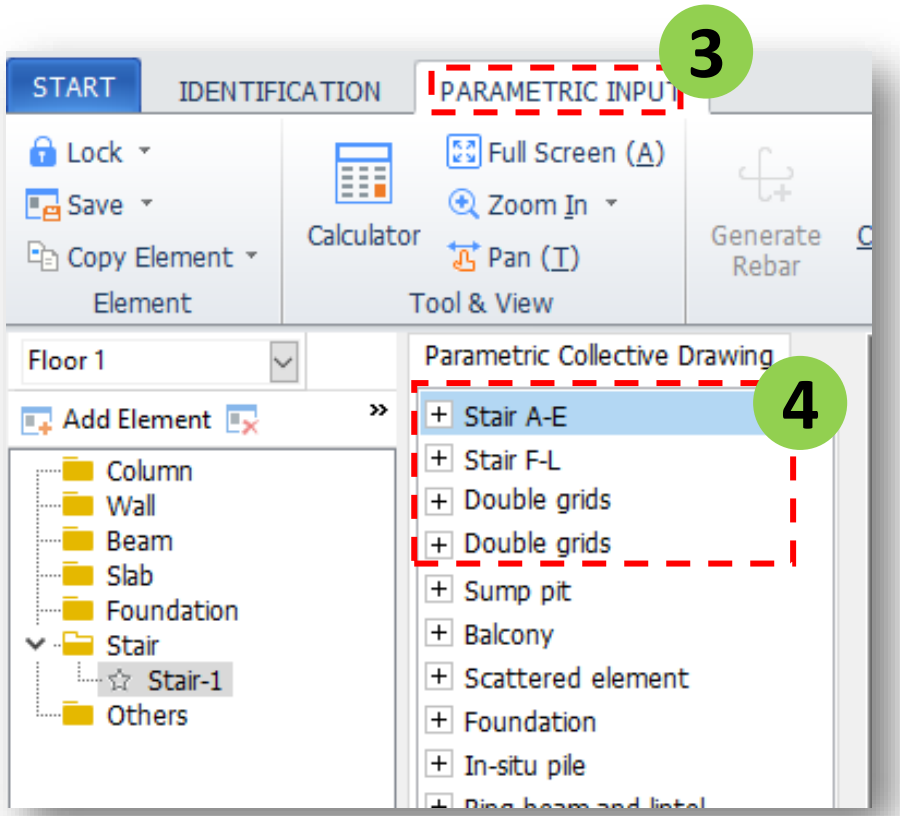


Single Element

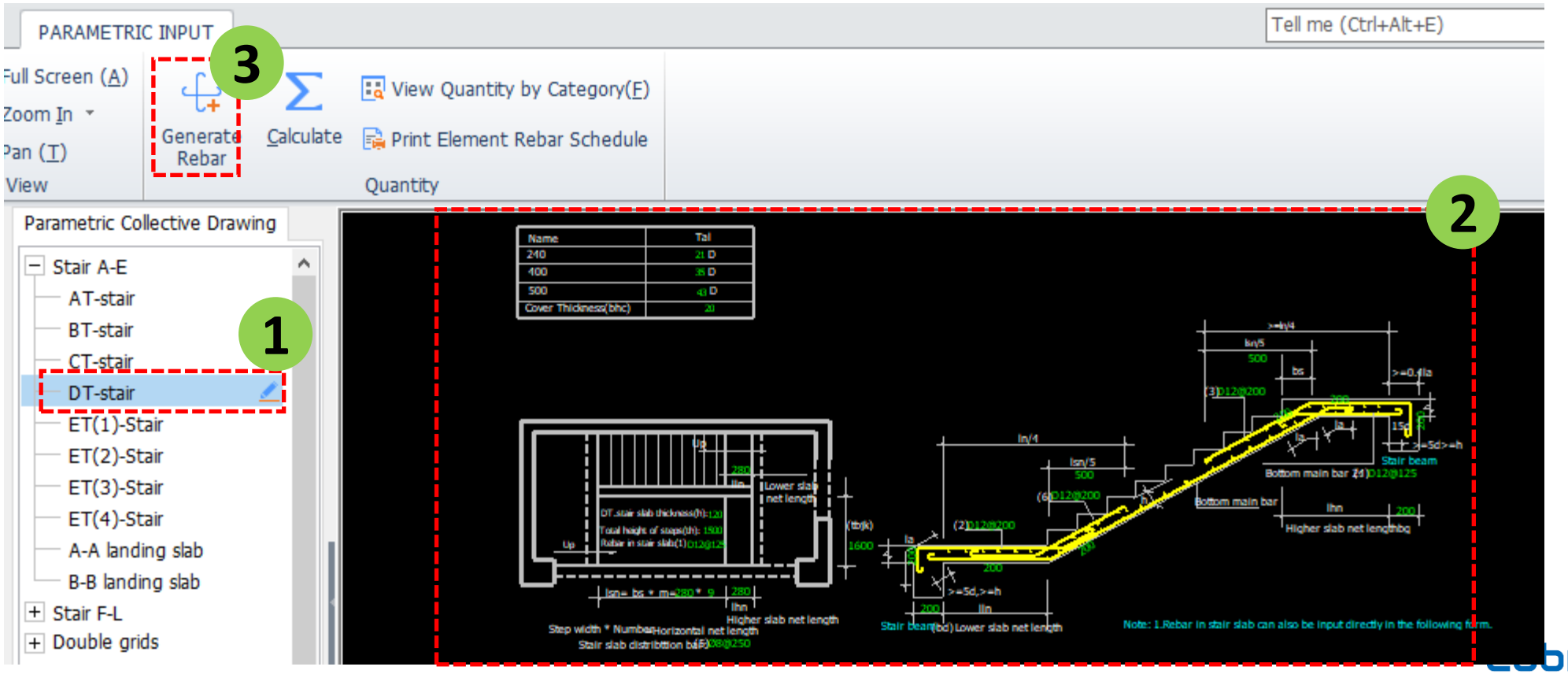

Define
Quantity

- 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

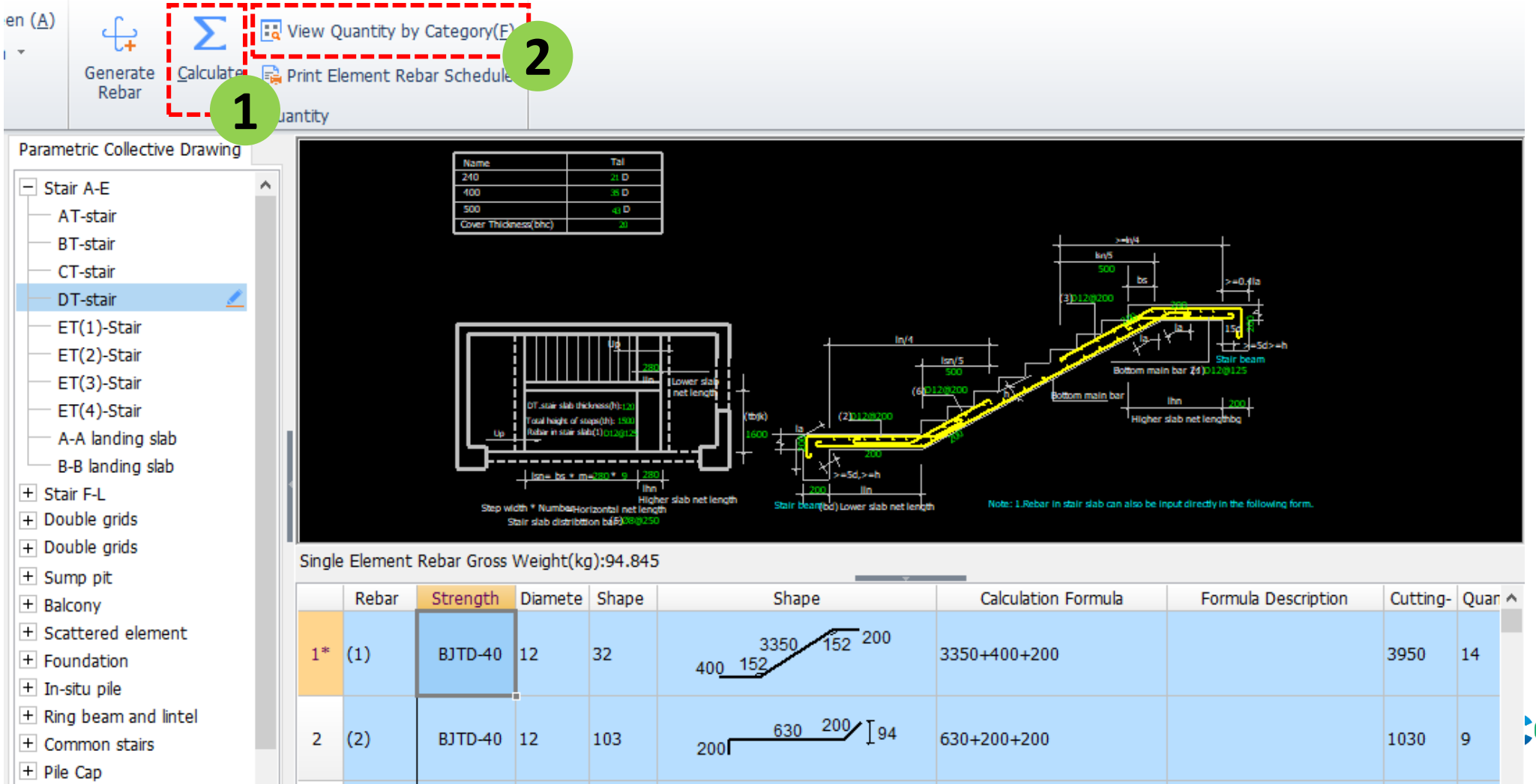




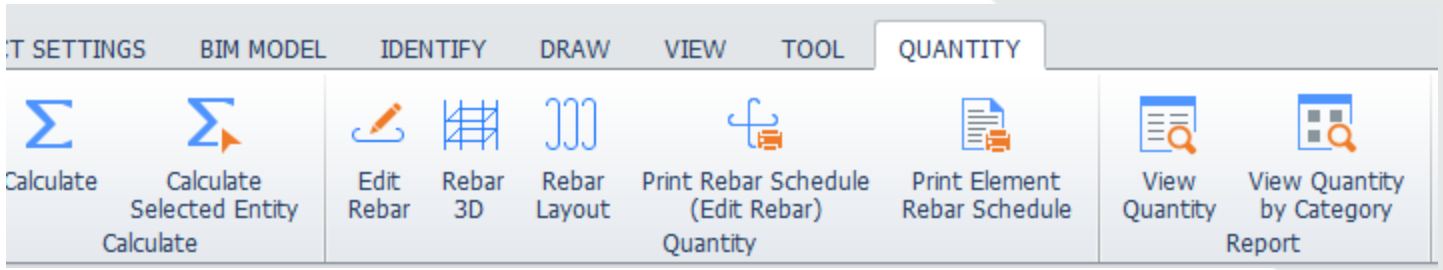
- Step 1: Edit Selected Staircase Type
- Step 2: Input all data in green
- Step 3: Click [Generate Rebar]

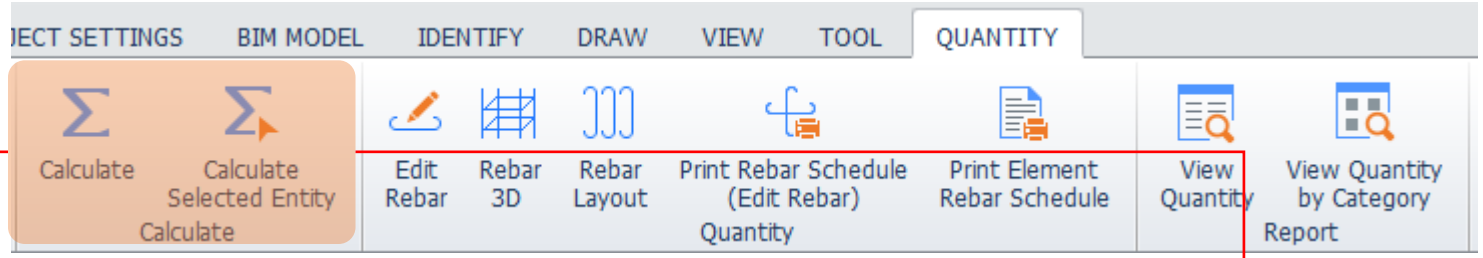


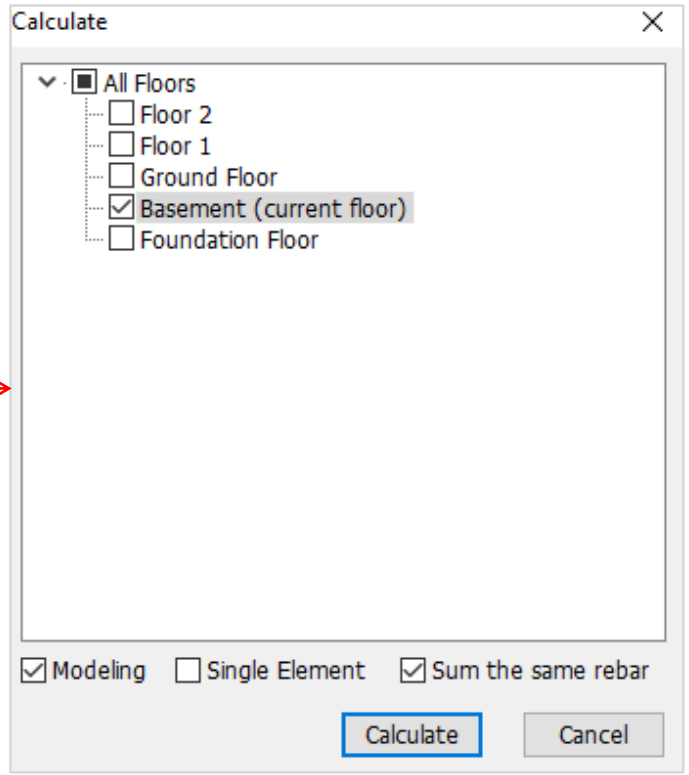
- Step 1: Click on [Calculate]
- Step 2: Click [View Quantity by Category]

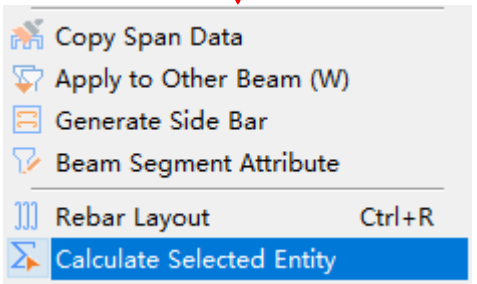


Quantity


T SETTINGS
BIM MODEL
IDENTIFY
DRAW
VIEW
TOOL
QUANTITY
Calculate
Calculate Selected Entity
Calculate
Edit Rebar
Rebar 3D
Rebar Layout
Print Rebar Schedule (Edit Rebar)
Print Element Rebar Schedule
Quantity
View Quantity
View Quantity by Category
Report

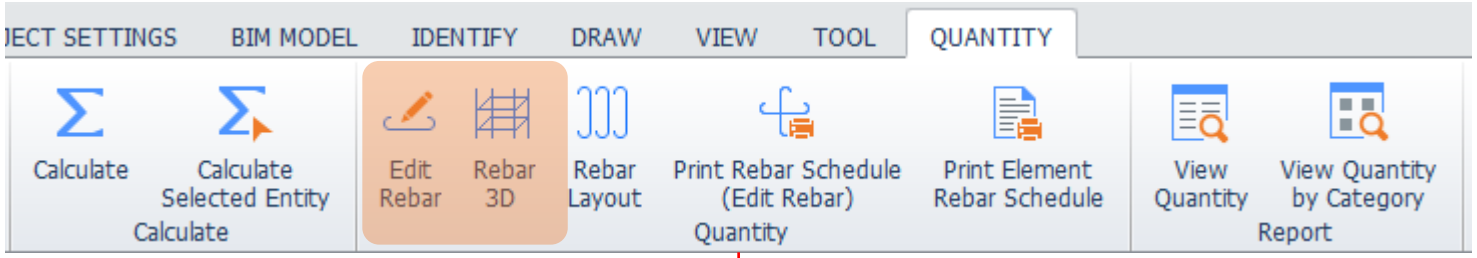


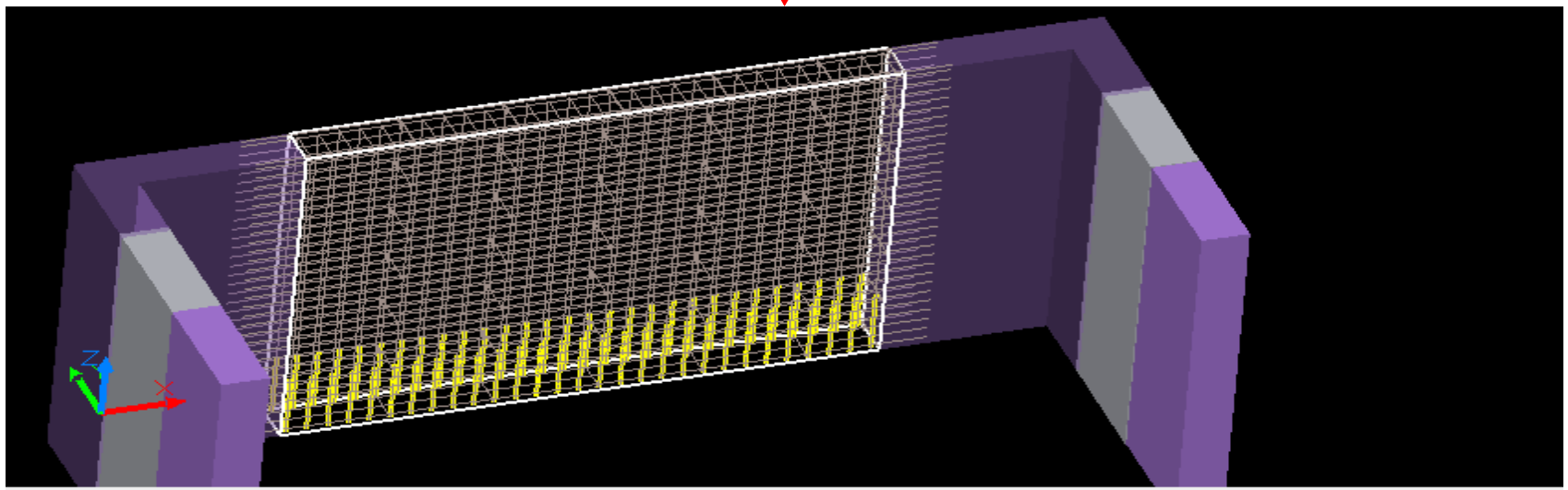




Click on an entity, **right click,** and select **calculate selected entity**

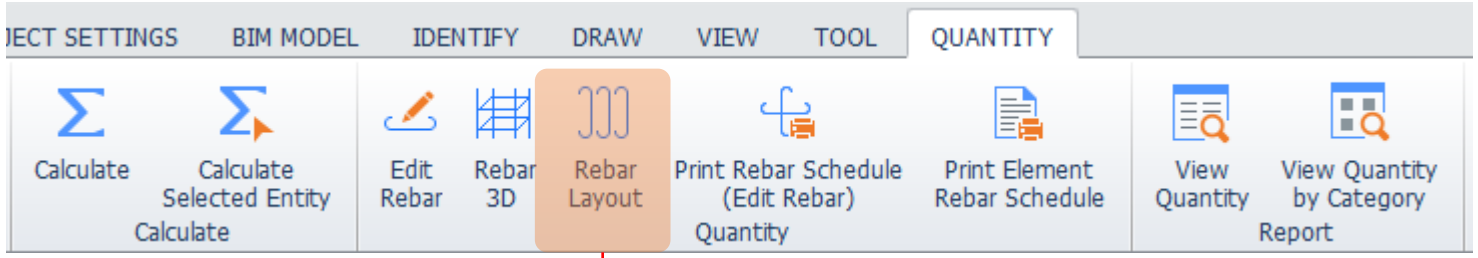
quantity function-**calculate**-Select floors-click calculate



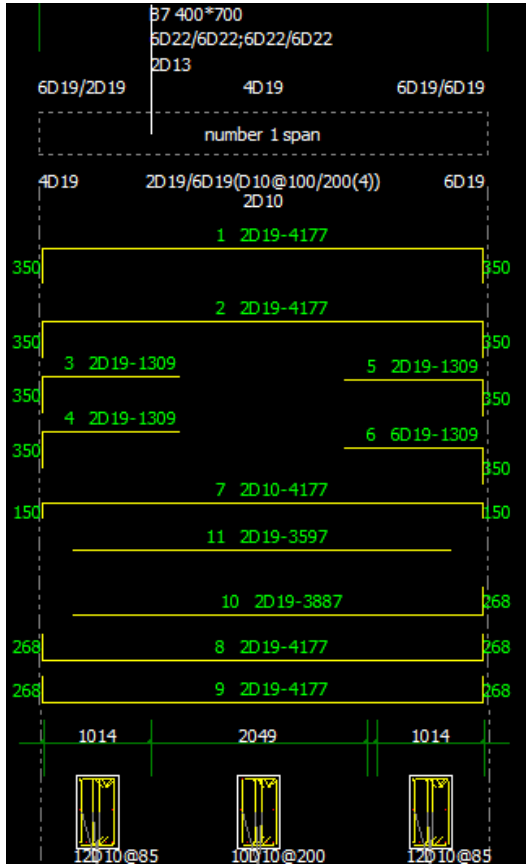


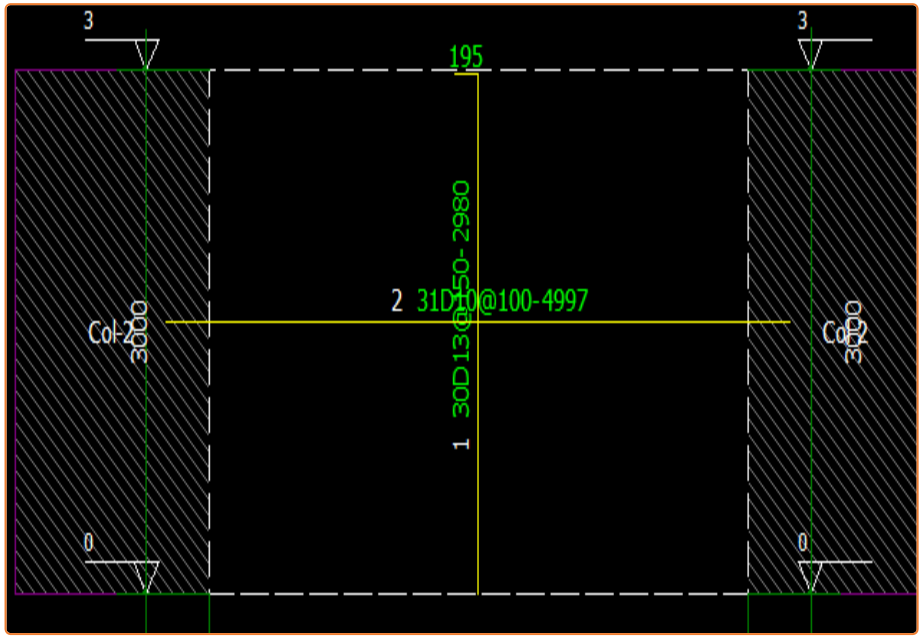
Insert Delete Rebar Info. Drawing Library Others Close Single Element Rebar Gross Weight (kg):4

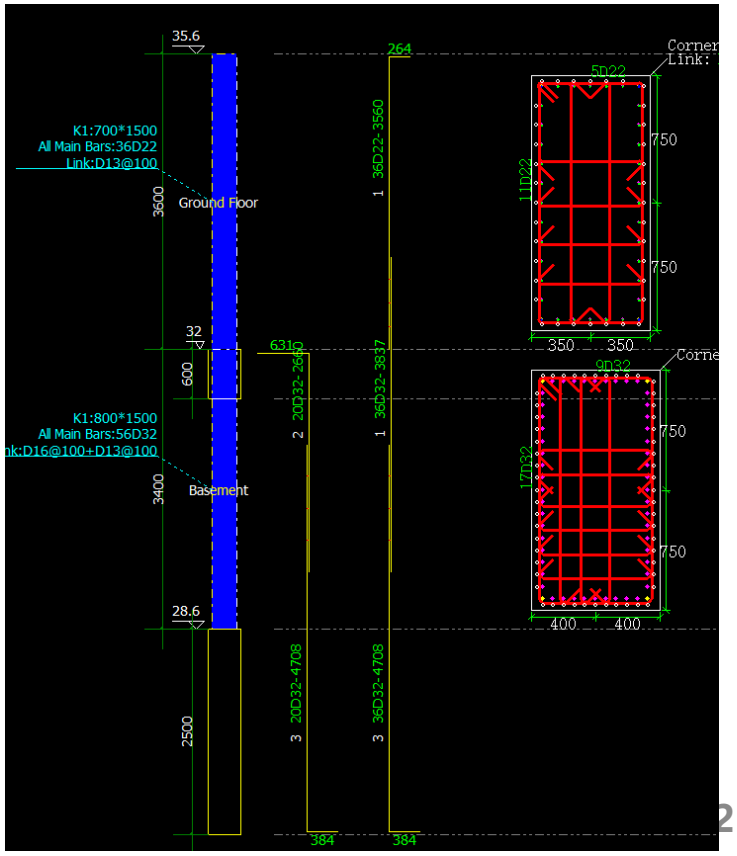
	Rebar	Strength	Diamete	Shape	Shape	Calculation Formula	Formula Description	Cutting-
1*	1	BJTD-40	13	601	2980 195	3000-20+15*d	Wall-Cover+Set bend	3175
							Net length+Length	

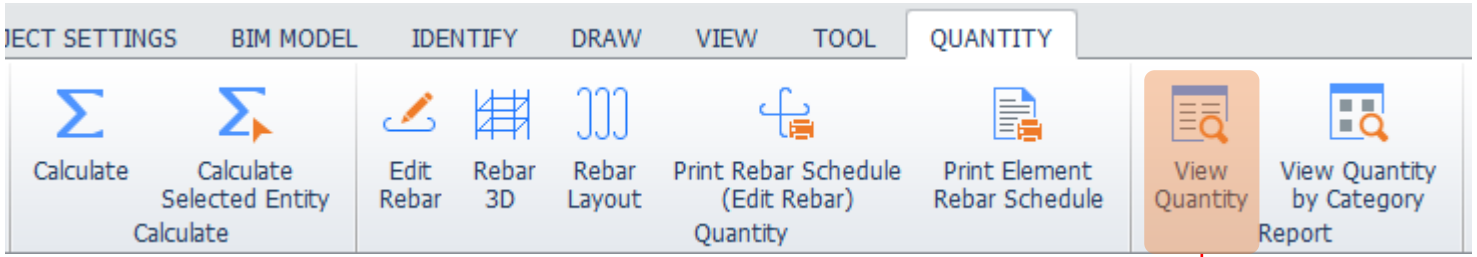


Click **Rebar Layout,** click the entity that already calculated





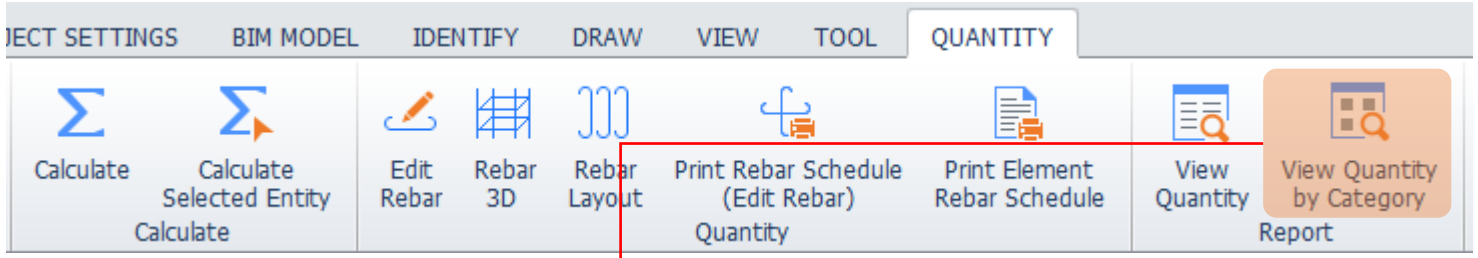


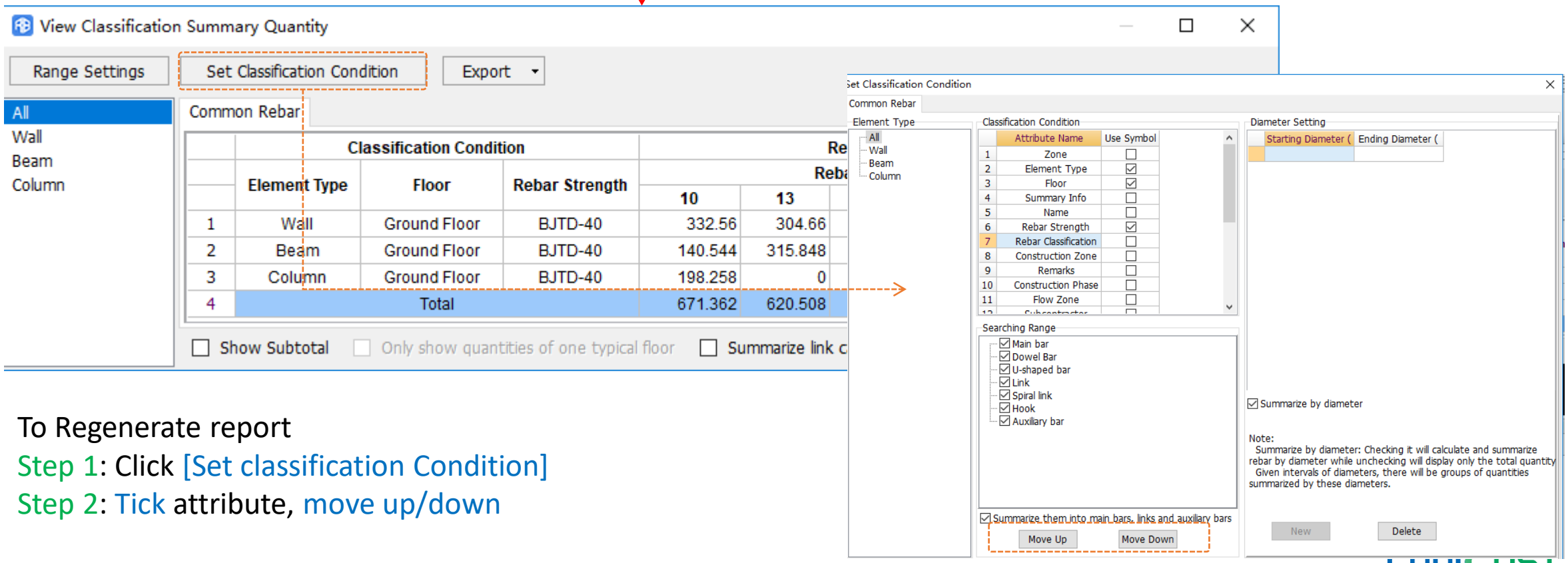


Common Rebar

Rebar Gross Weight (kg): 656.093

	Element Name	Rebar Gross Weight (kg)	BJTD-40					
			10	13	16	20	22	Total
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



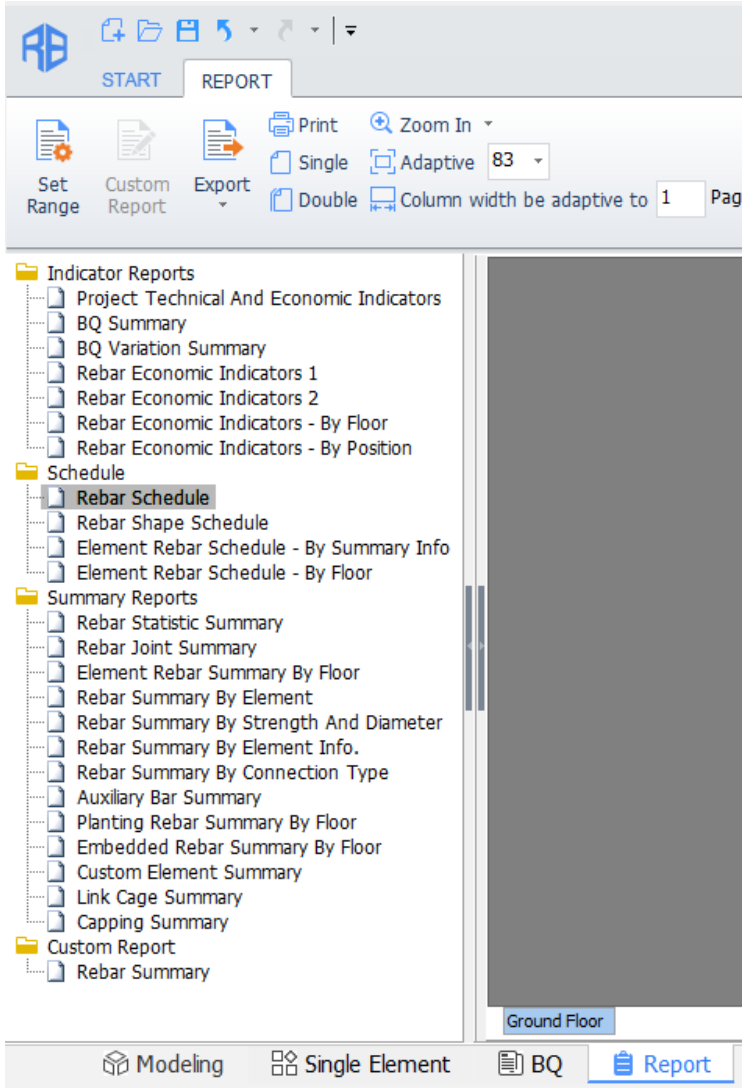


To Regenerate report

Step 1: Click [Set classification Condition]

Step 2: Tick attribute, move up/down

Various Type of Reports



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

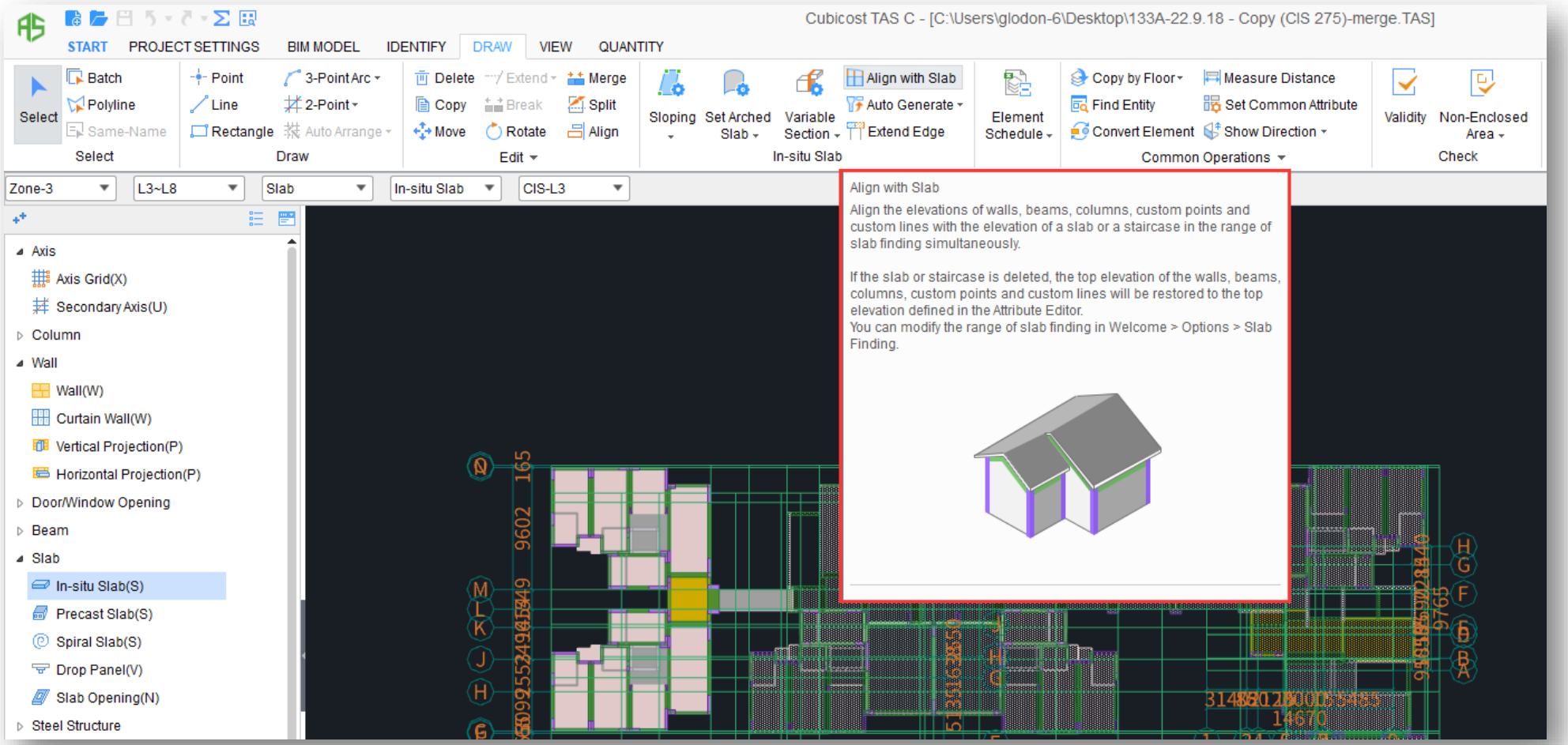
Shortcut Key

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)

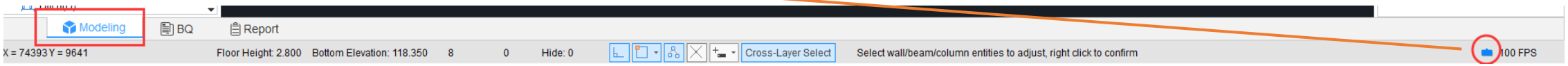
Function Tips

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

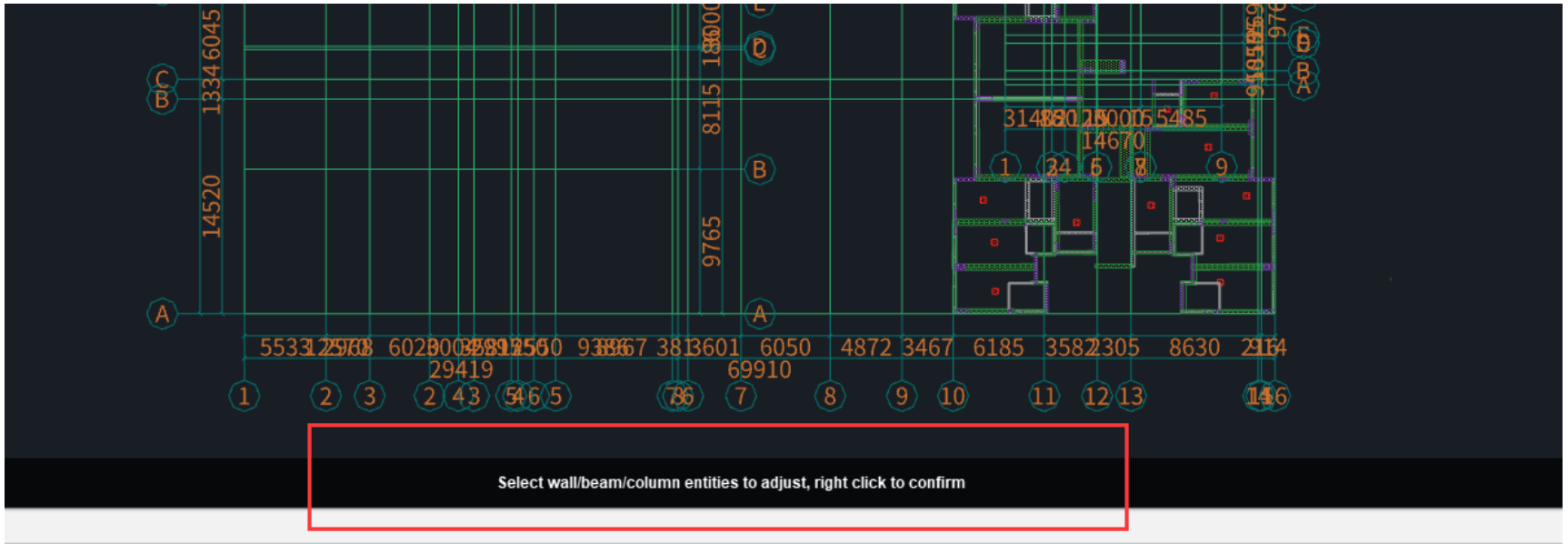


Step-by-step Tips

Click  at bottom Tool Bar



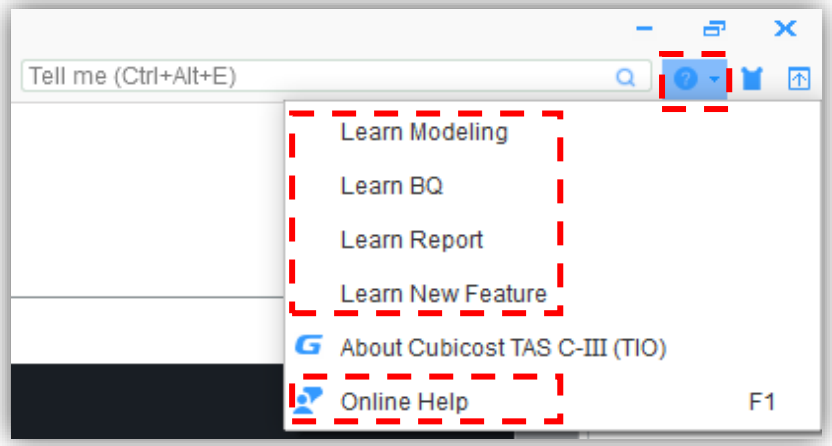
Guide step by step until complete the function



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

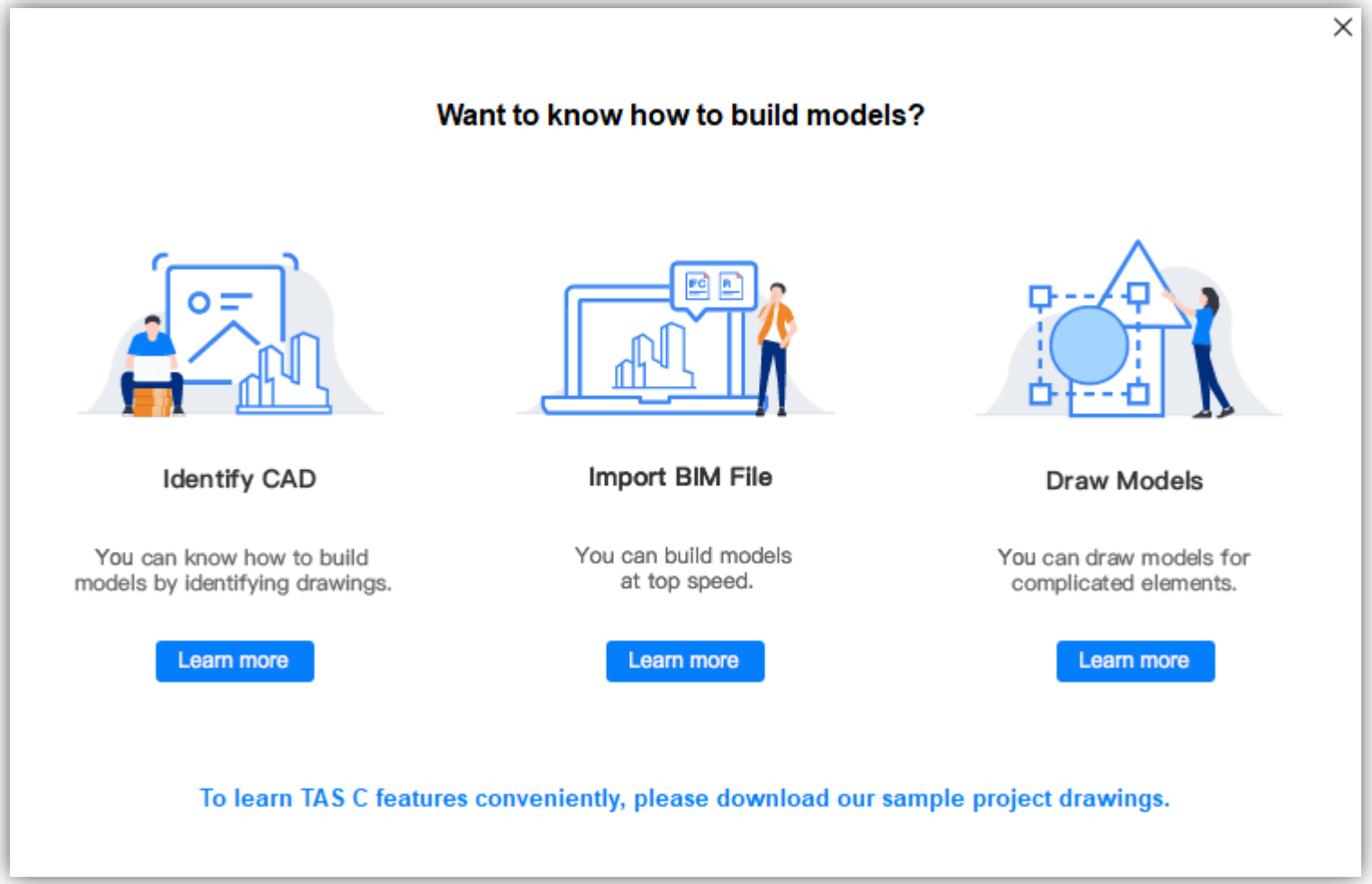
Help Center is:

- Online Help (F1)

Help Video and Help Center

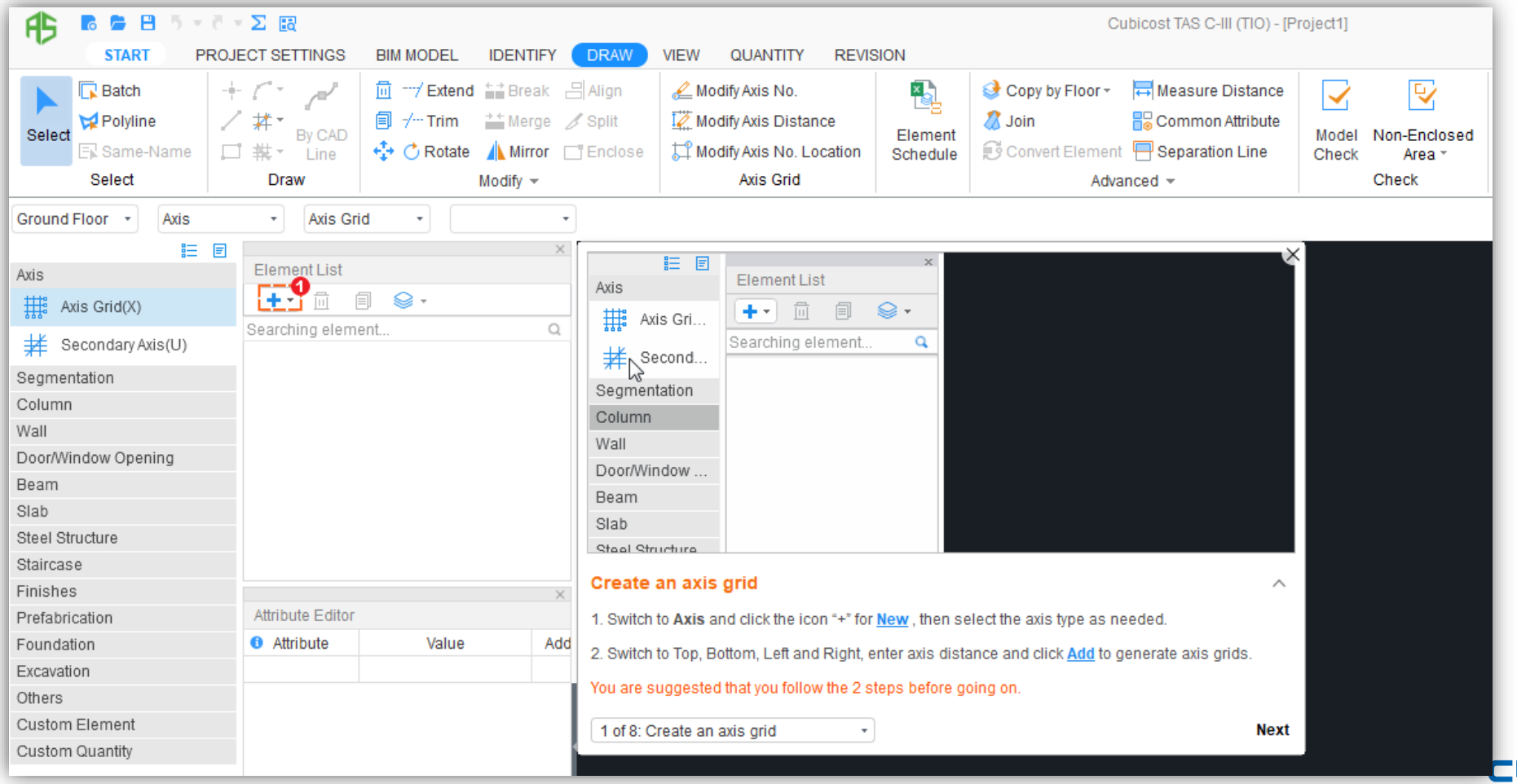
Learn Modeling:

- Identify CAD
- Import BIM File
- Draw Models



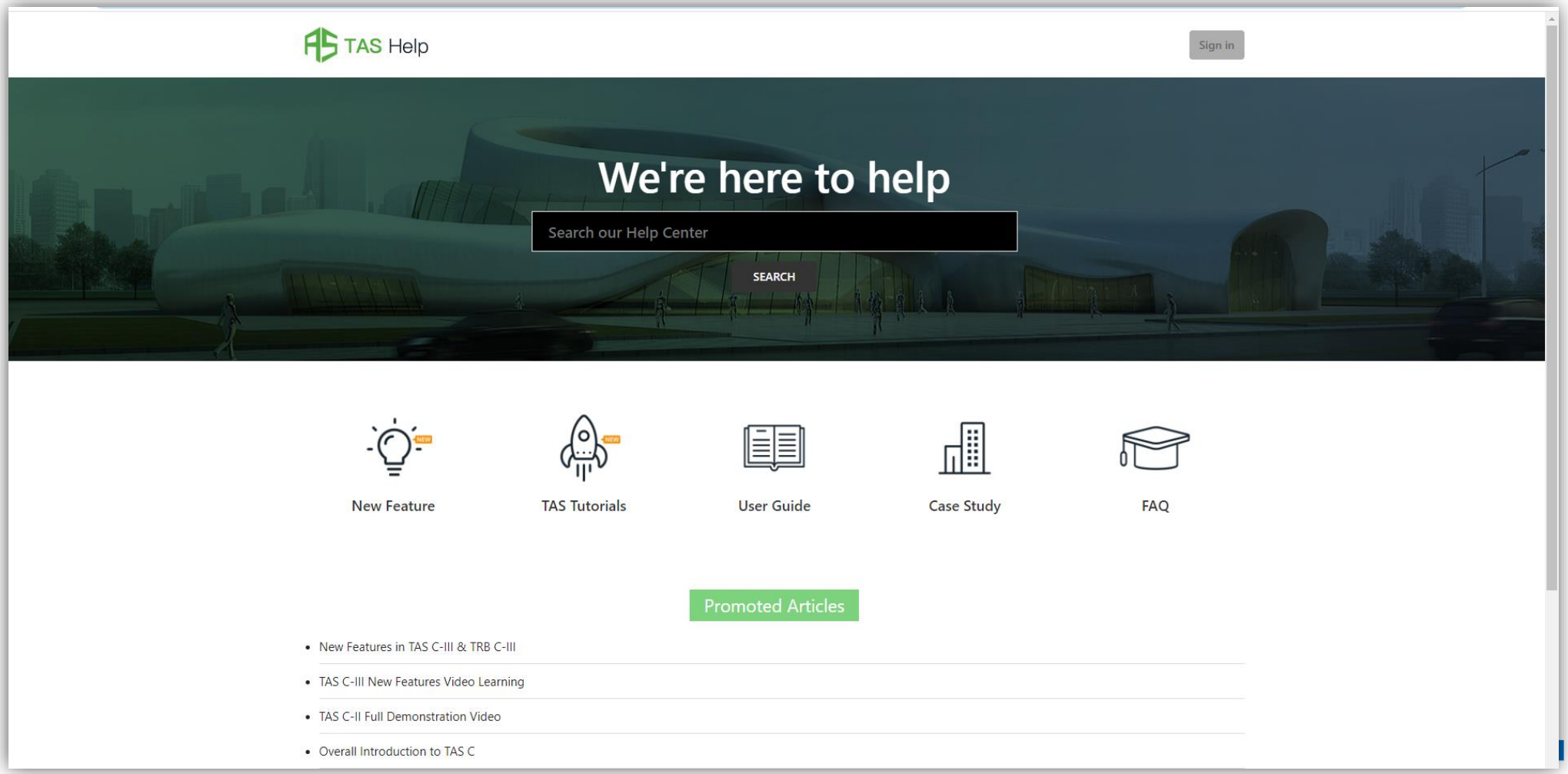
Help Video and Help Center

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

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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


Thank
You