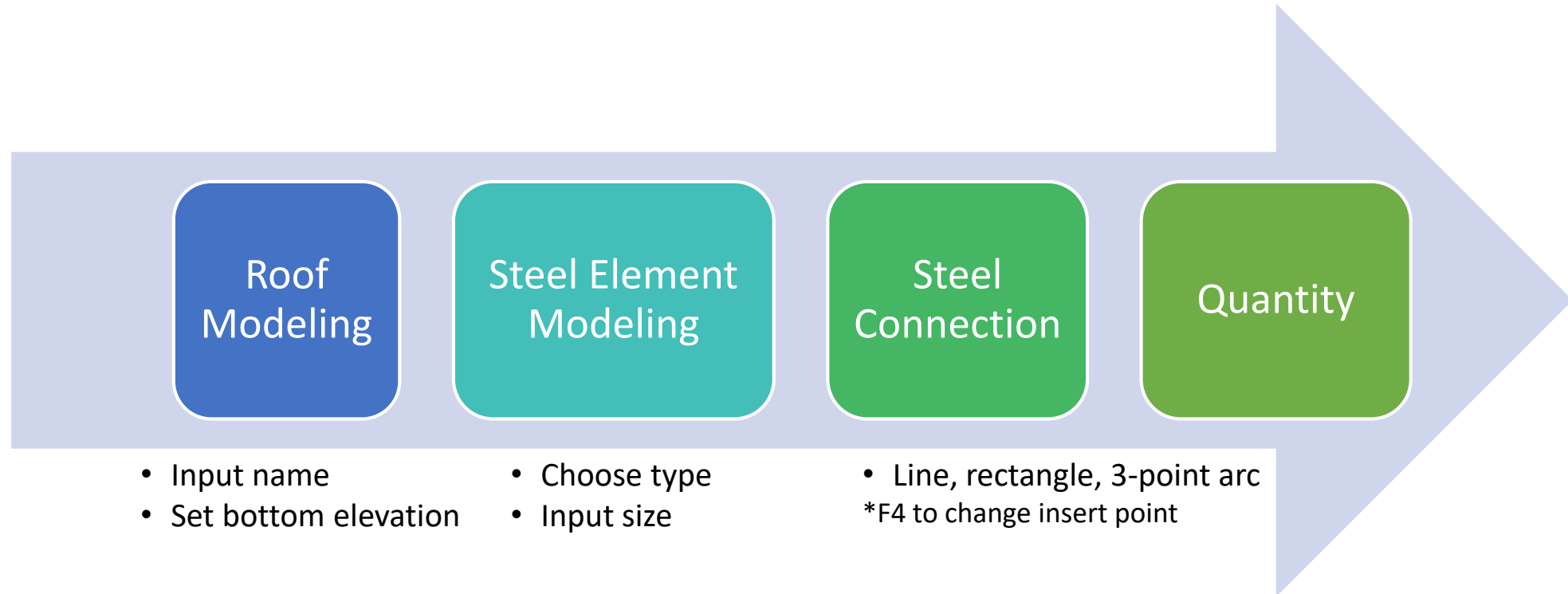


Modeling Roof and Steel Structures



Point Type

Segmentation

Column

Wall

Door/Window Opening

Beam

Slab

Steel Structure

Staircase

Finishes

Prefabrication


Foundation

Excavation


Others


 Floor Area(U)


 Courtyard(C)


 Site Leveling(G)


 Apron(A)

 Steps(F)


 Post Cast Strip(L)


 Eave(E)

 Canopy(P)

 Balcony(Y)

 Roof(M)

 Kerb(P)

 Coping(T)

 Railing(R)

Custom Element



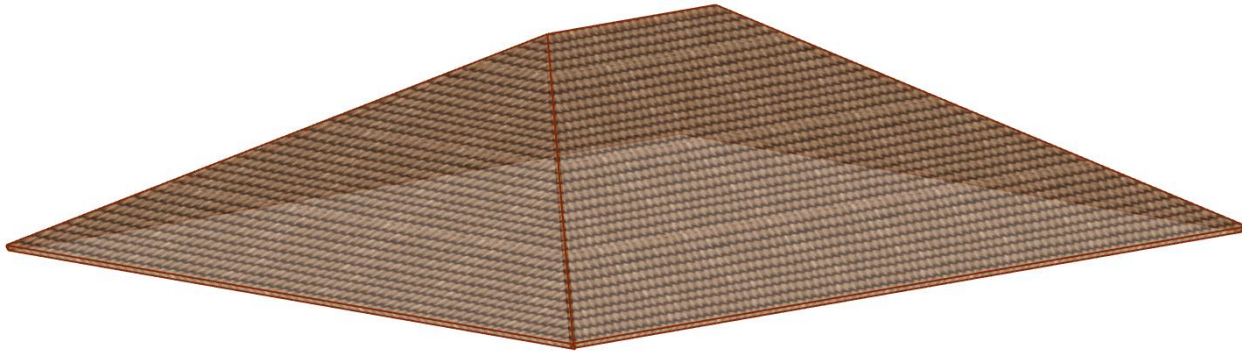
Section 1

Roof Modeling

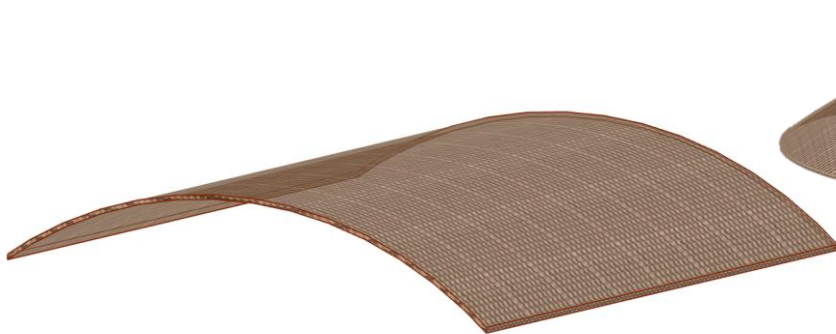


Types of Roof

- Using Roof Element → Set Sloping Roof



- Using Slab + Roof Element → Slab: Set Arched Slab → Roof: Adapt to Slab → delete slab entity





Point Type

- Segmentation
- Column
- Wall
- Door/Window Opening
- Beam
- Slab
- Steel Structure
- Staircase
- Finishes
- Prefabrication
- Foundation
- Excavation
- Others
 - Floor Area(U)
 - Courtyard(C)
 - Site Leveling(G)
 - Apron(A)
 - Steps(F)
 - Post Cast Strip(L)
 - Eave(E)
 - Canopy(P)
 - Balcony(Y)
 - Roof(M)**
 - Kerb(P)
 - Coping(T)
 - Railing(R)
- Custom Element



Linear Roof Modeling



Define Roof

- Step 1: New Element List → Roof → Set Name
- Step 2: Draw Roof Entity

The screenshot displays the software interface for defining a roof. The 'Element List' panel on the left shows a 'Roof' element selected, indicated by a green circle with the number '1'. The 'Attribute Editor' panel below it shows the 'Name' field set to 'Penutup Atap', highlighted with a red dashed box and a green circle with the number '2'. The main view shows a grid with dimensions 6000x6000 and a red dashed box around the 'Penutup Atap' attribute.

Attribute	Value	Add
Common Attribute		
Name	Penutup Atap	
Thickness (mm)	(50)	
Top Elevation (m)	6.000	
Entity Object Type	Normal Object	
Revision		
Summary Info		
Remarks		
Calculation Attribute		
Construction Attribute		
Display Style		

Continue →

Set Sloping Roof

- **Step 3:** Select Roof Entity → Batch Define by Slope
**Another method is to split roof, then Define by Three Points on each roof plane*

The screenshot shows the software interface with the 'Batch Define Sloping Roof by Slope' dialog box open. The dialog box contains a table with the following data:

Sideline Name	Angle	Sideline Elevation (m)	Extension (mm)
Sideline 1	30	6.000	0
Sideline 2	30	6.000	0
Sideline 3	30	6.000	0
Sideline 4	30	6.000	0

Below the table, there is a 'Roof Elevation (m)' input field and a text box explaining the 'Roof Elevation' parameter. The dialog box also has 'OK' and 'Cancel' buttons.

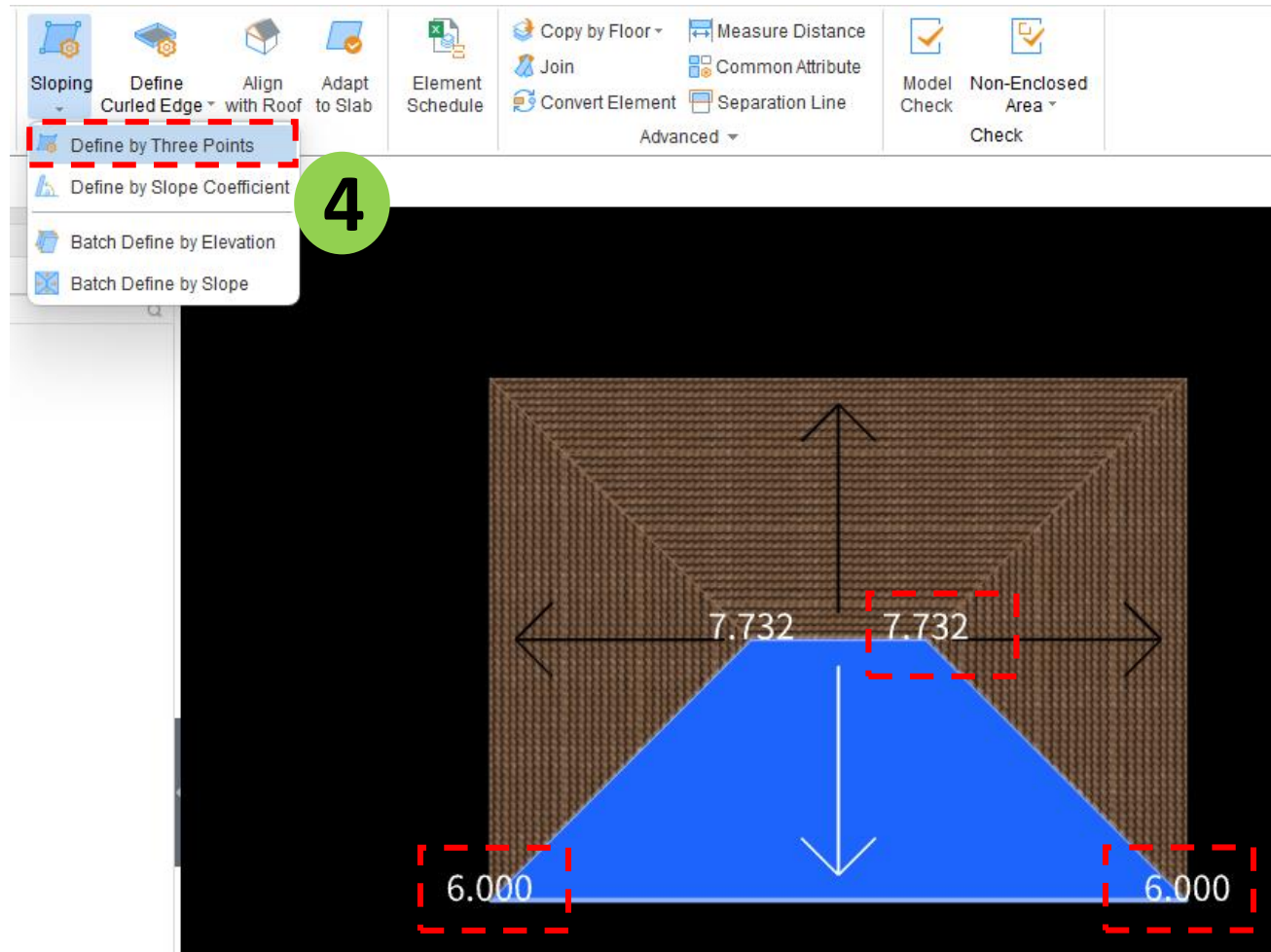
To the right of the dialog box, a 3D model of a roof is shown. The roof is a blue square with four sides labeled: '[Sideline 1]30/6' on the left, '[Sideline 2]30/0' on the bottom, '[Sideline 3]30/0' on the right, and '[Sideline 4]30/0' on the top.

A green circle with the number '3' is overlaid on the software interface, indicating the current step in the process.

Continue →

Set Sloping Roof

- **Step 4:** To edit Roof Elevation → use Define by Three Points on each roof plane



Continue →



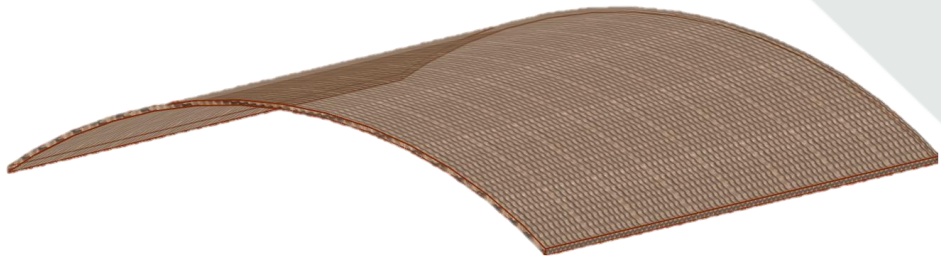
- Segmentation
- Column
- Wall
- Door/Window Opening
- Beam
- Slab
- Steel Structure
- Staircase
- Finishes
- Prefabrication
- Foundation
- Excavation
- Others
 - Floor Area(U)
 - Courtyard(C)
 - Site Leveling(G)
 - Apron(A)
 - Steps(F)
 - Post Cast Strip(L)
 - Eave(E)
 - Canopy(P)
 - Balcony(Y)
 - Roof(M)**
 - Kerb(P)
 - Coping(T)
 - Railing(R)
- Custom Element



Point Type



Arched Roof Modeling



Define Roof

- Step 1: New Element List → Roof → Set Name
- Step 2: Draw Roof Entity

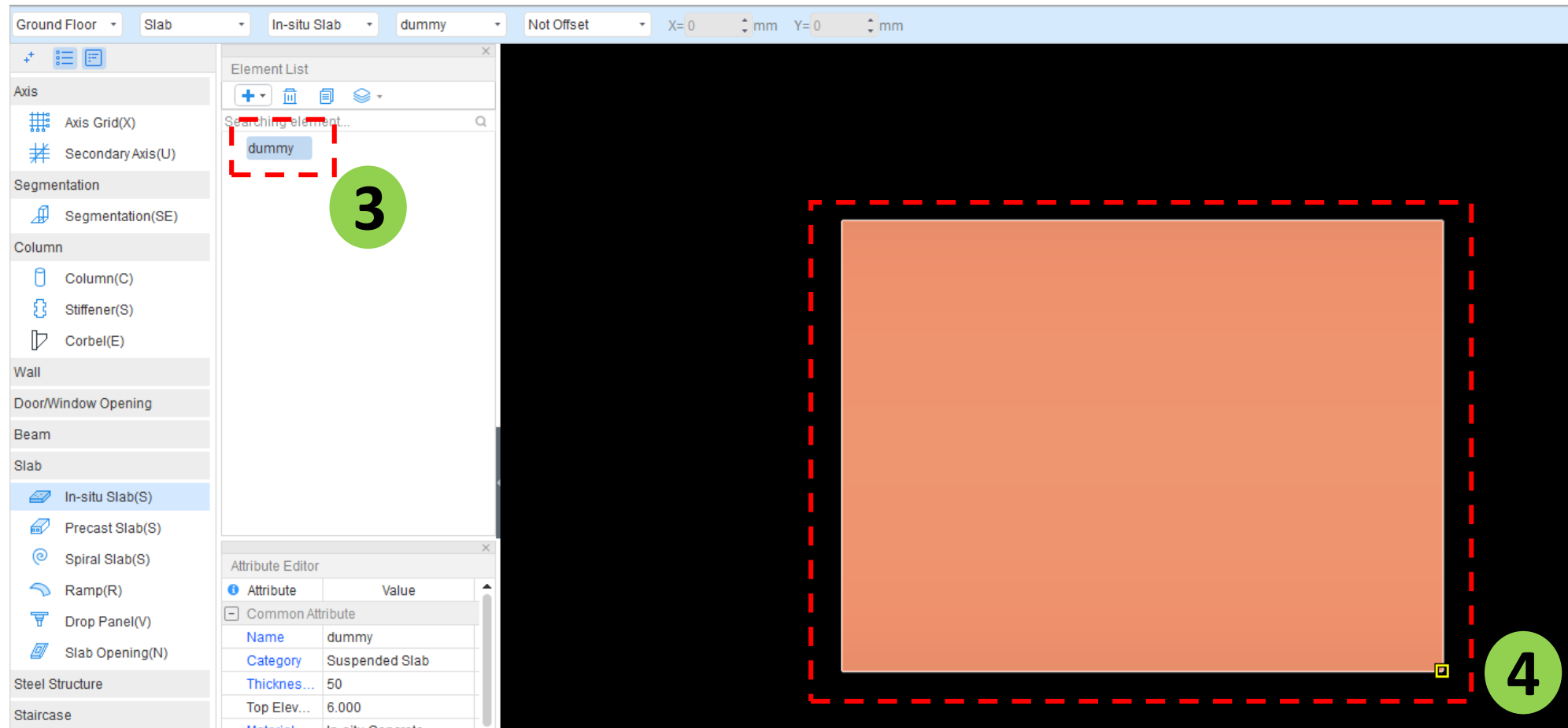
The screenshot displays the software interface for defining a roof. The 'DRAW' tab is active, and the 'Roof' sub-tab is selected. The 'Element List' panel shows a 'Roof' entity highlighted with a red dashed box and a green circle '1'. The 'Attribute Editor' panel shows the 'Name' attribute set to 'Penutup Atap' with a red dashed box and a green circle '2'. The main view shows a grid with dimensions 6000x6000 and a vertical dimension of 24000.

Attribute	Value	Add
Common Attribute		
Name	Penutup Atap	
Thickness (mm)	(50)	
Top Elevation (m)	6.000	
Entity Object Type	Normal Object	<input type="checkbox"/>
Revision		<input type="checkbox"/>
Summary Info		<input type="checkbox"/>
Remarks		<input type="checkbox"/>
Calculation Attribute		
Construction Attribute		
Display Style		

Continue →

Draw Slab Dummy

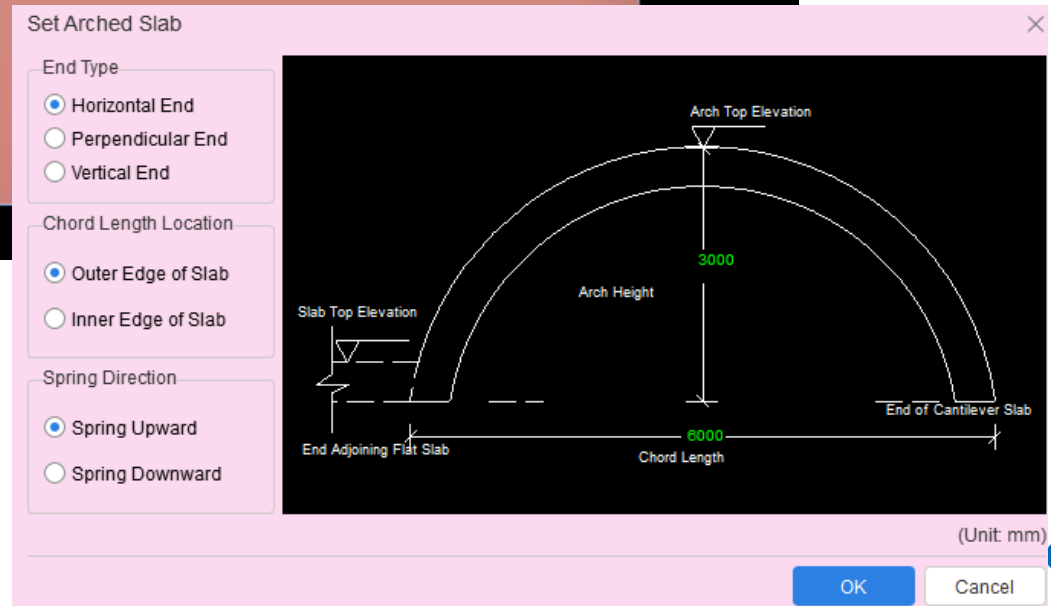
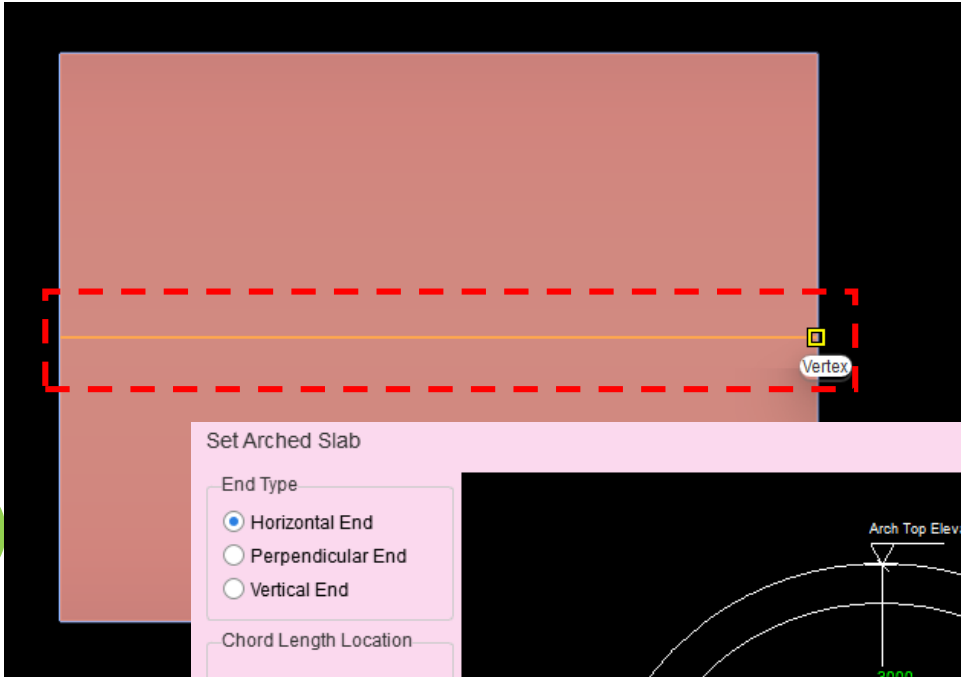
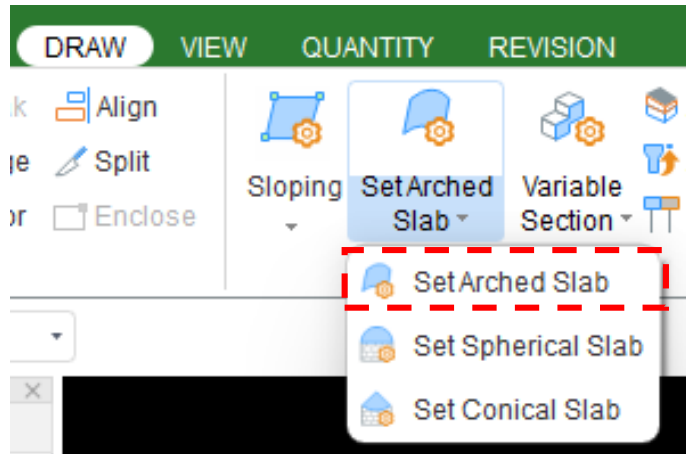
- **Step 1:** Go to In-situ Slab Element → New Element List → Slab → Set Name: dummy
- **Step 2:** Draw Slab Dummy Entity to match roof sideline



Continue →

Set Arched Slab Dummy

- Step 5: Select Slab Entity → Set Arched Slab
**You can also set spherical slab or set conical slab (depends on roof shape)*



Continue →

Roof Entity → Adapt to Slab

- Step 6: Back to Roof Element → Adapt to Slab to create arched roof, then delete slab dummy entity

