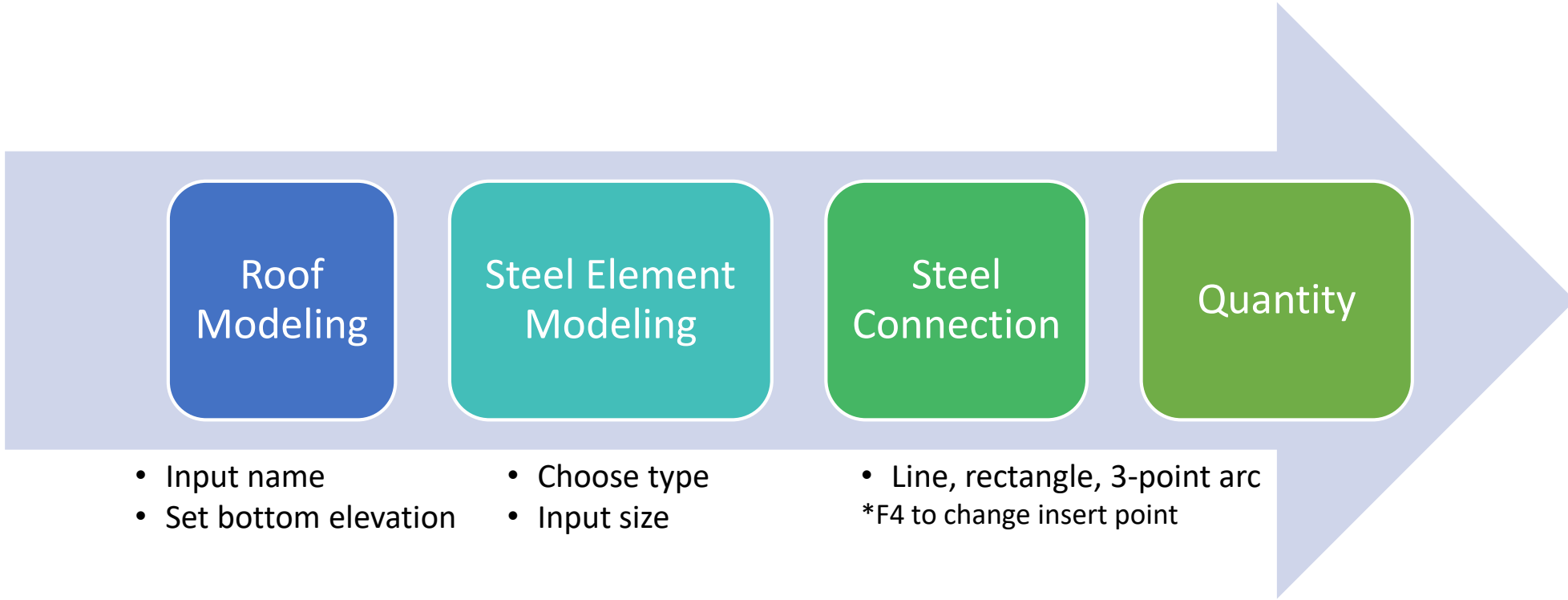
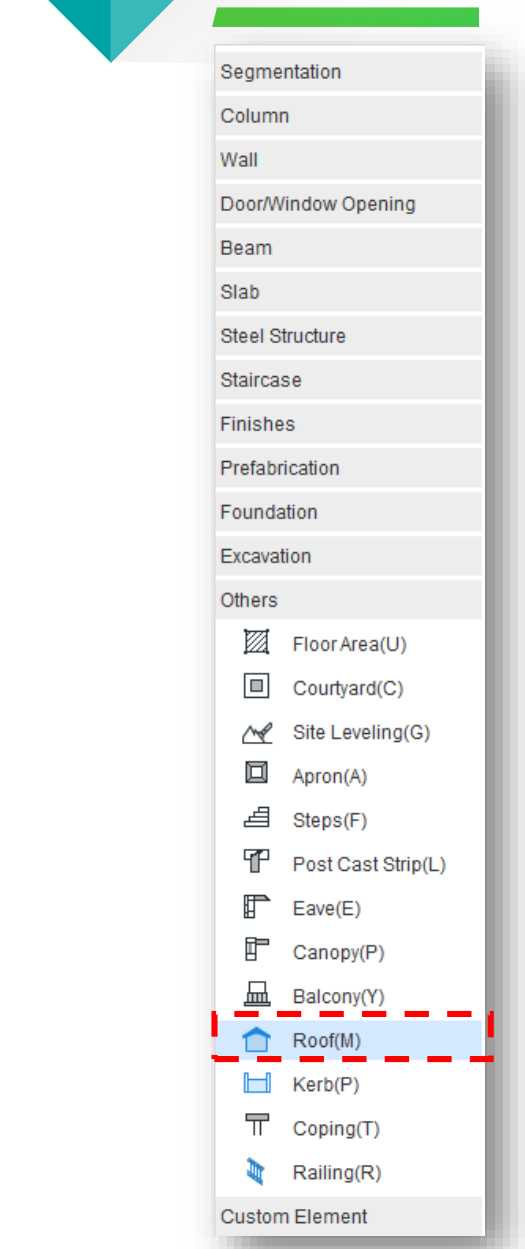
Modeling Roof and Steel Structures



Point Type



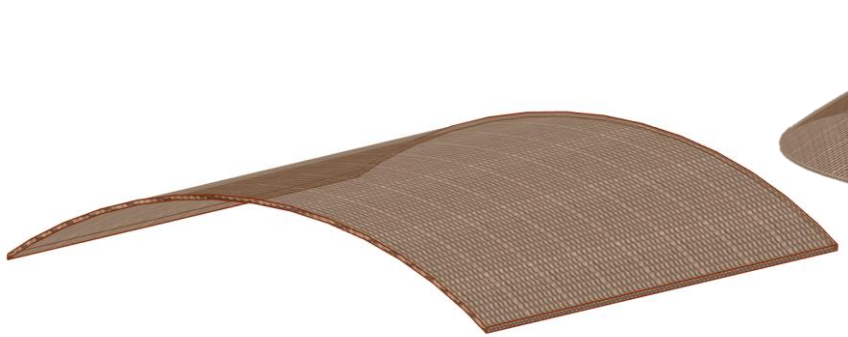
Section 1

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**



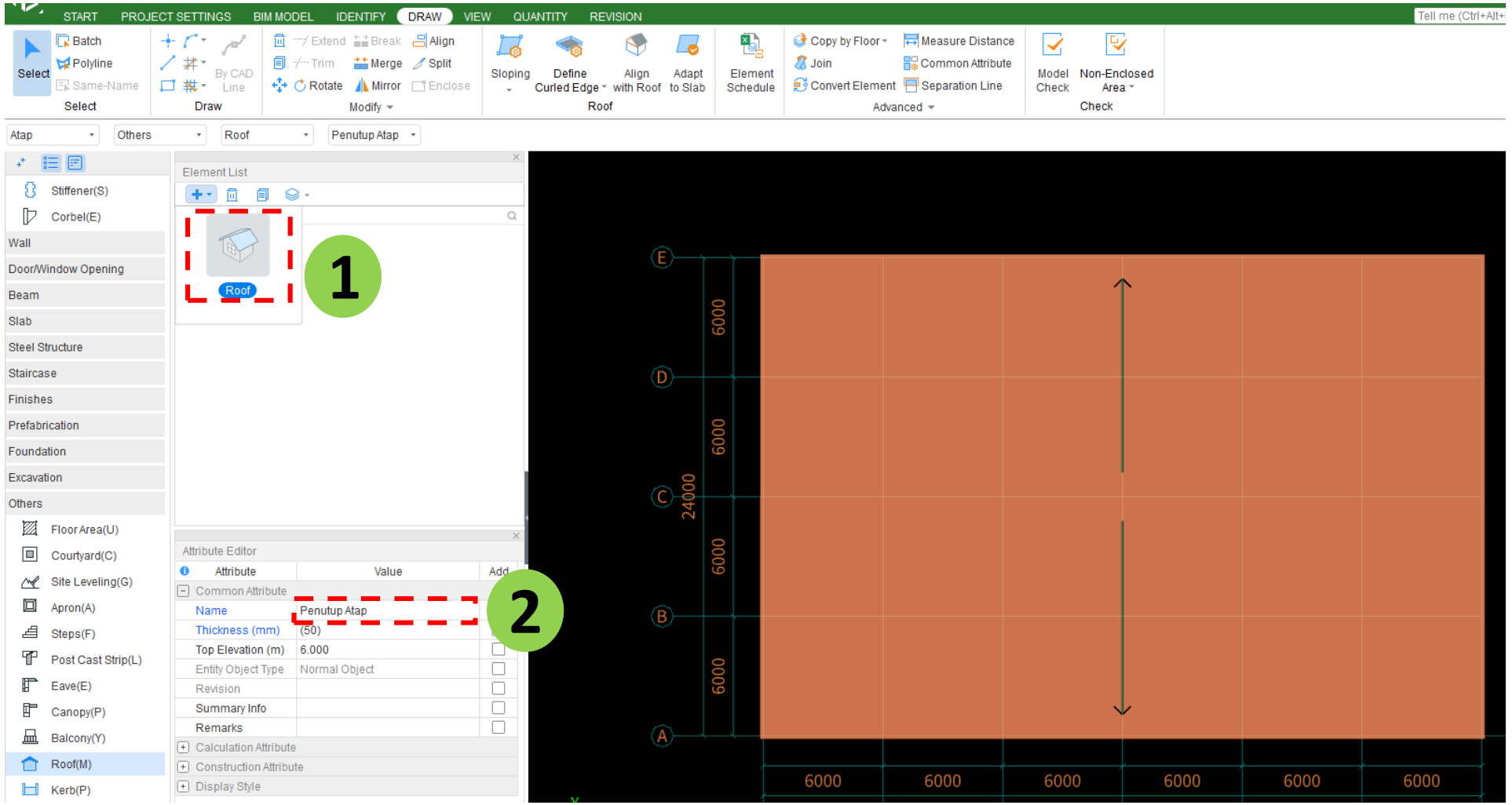
Point Type

- 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



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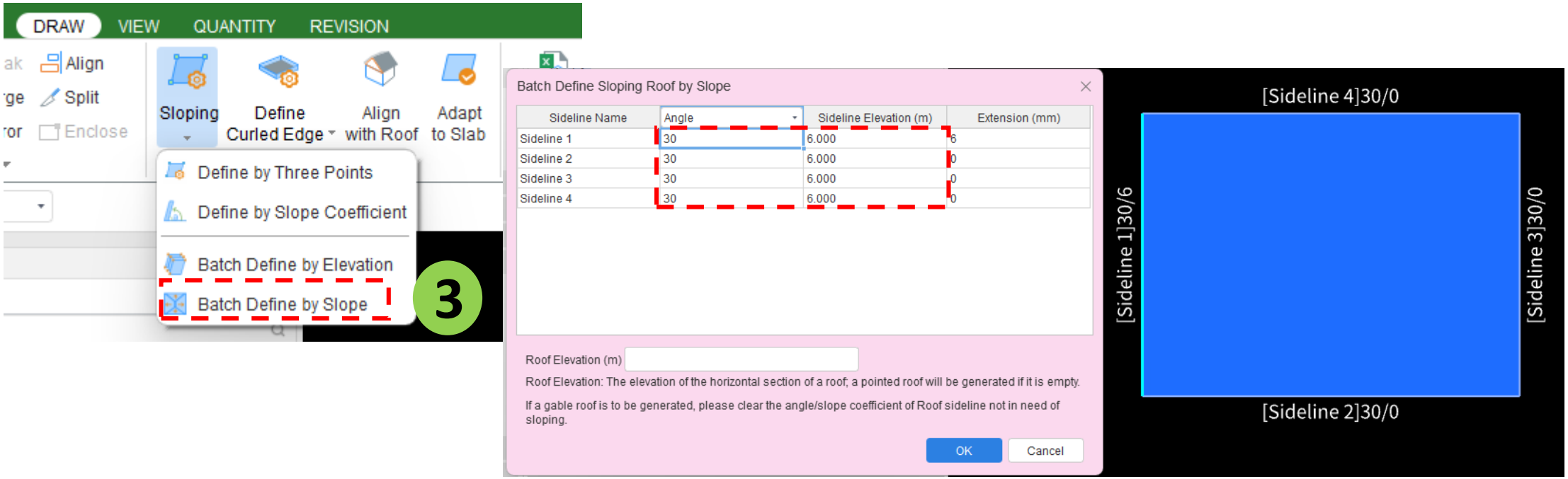
Set Sloping Roof

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



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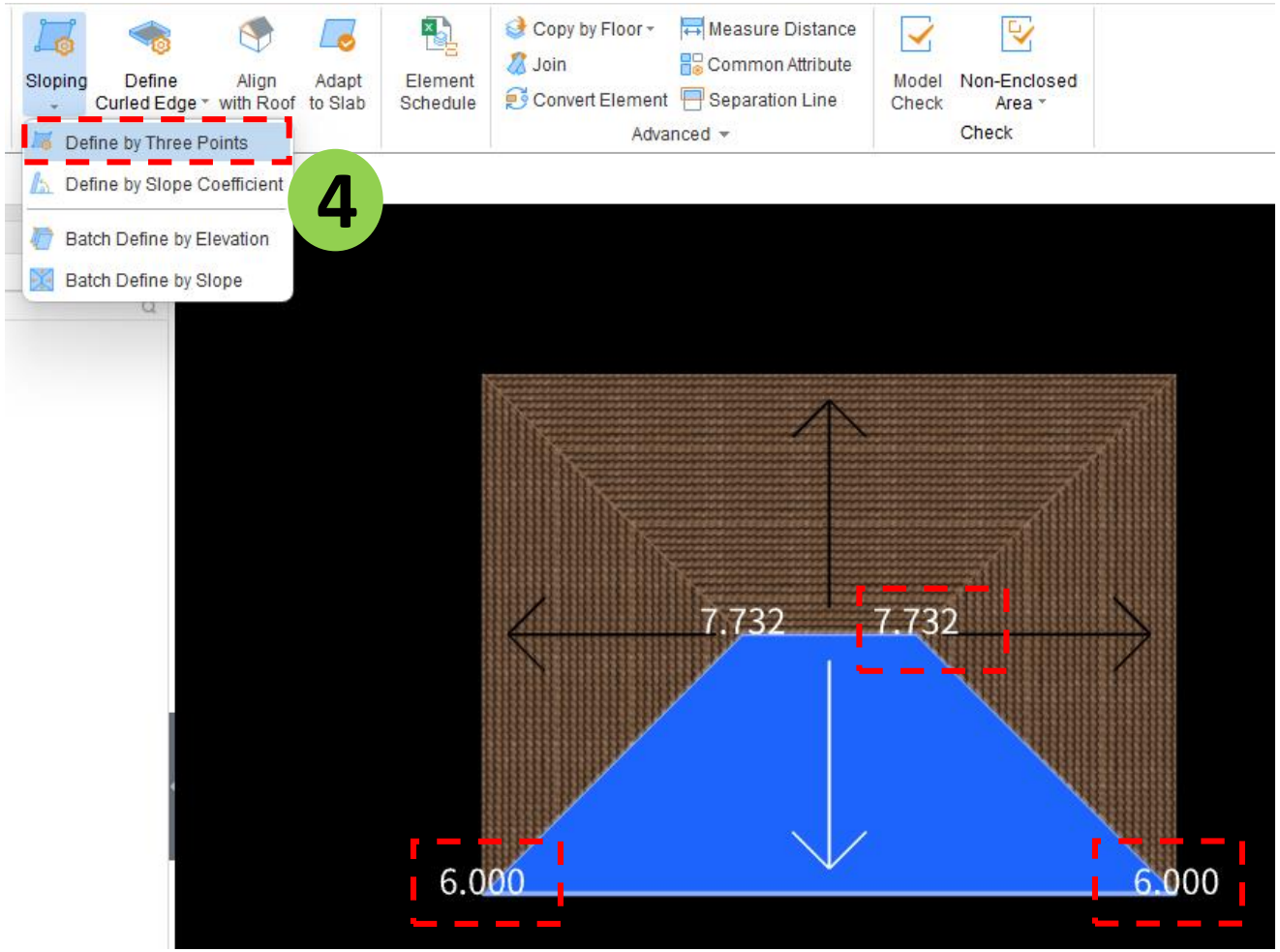
Set Sloping Roof

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



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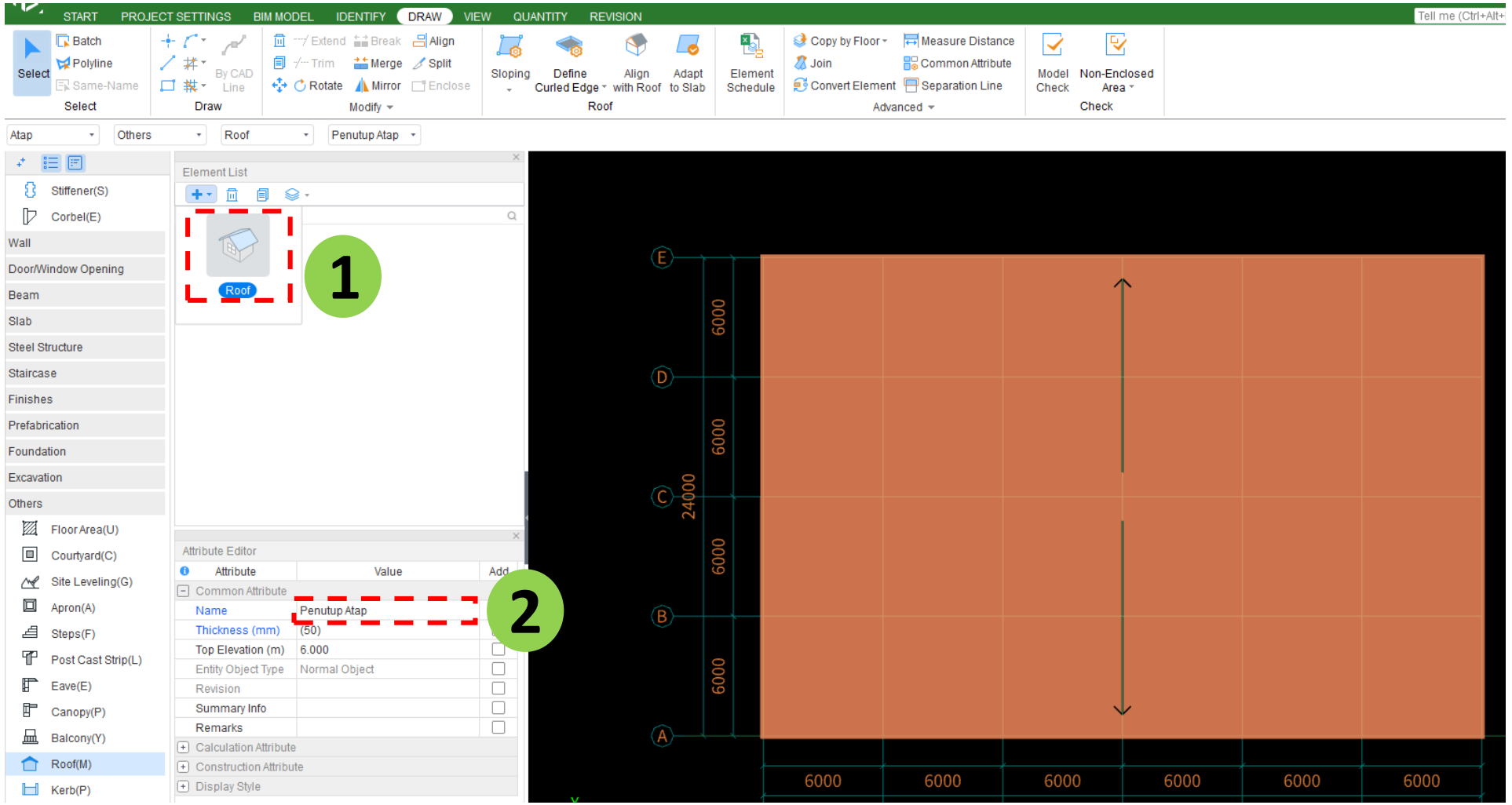
Point Type

Arched Roof Modeling

- 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

Define Roof

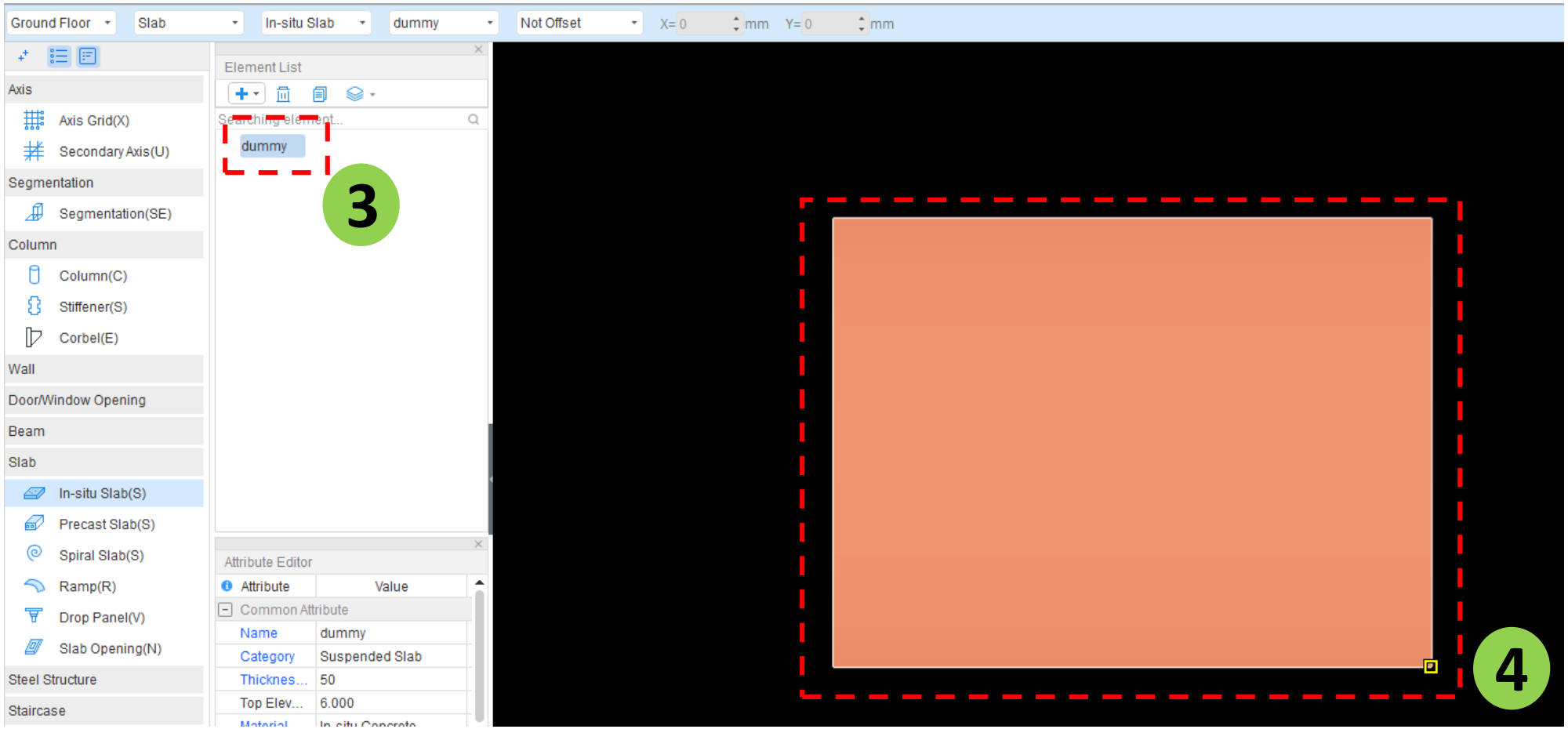
- Step 1: New Element List → Roof → Set Name
- Step 2: Draw Roof Entity



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



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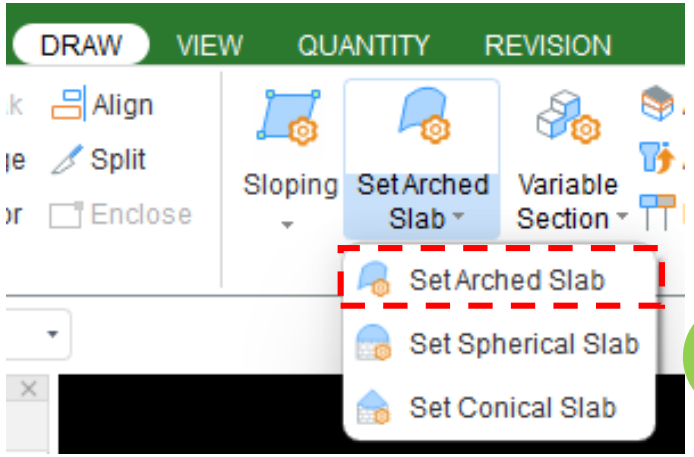
Set Arched Slab Dummy

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



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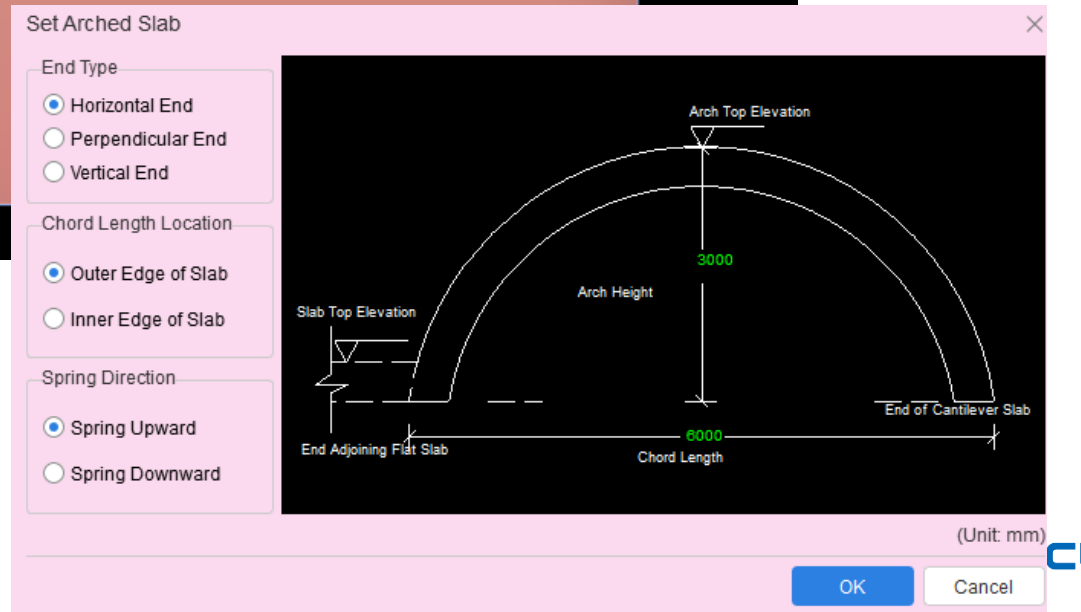

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Roof Entity → Adapt to Slab

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