

The contemporary khan

a housing and employment hub in Istanbul



The contemporary khan

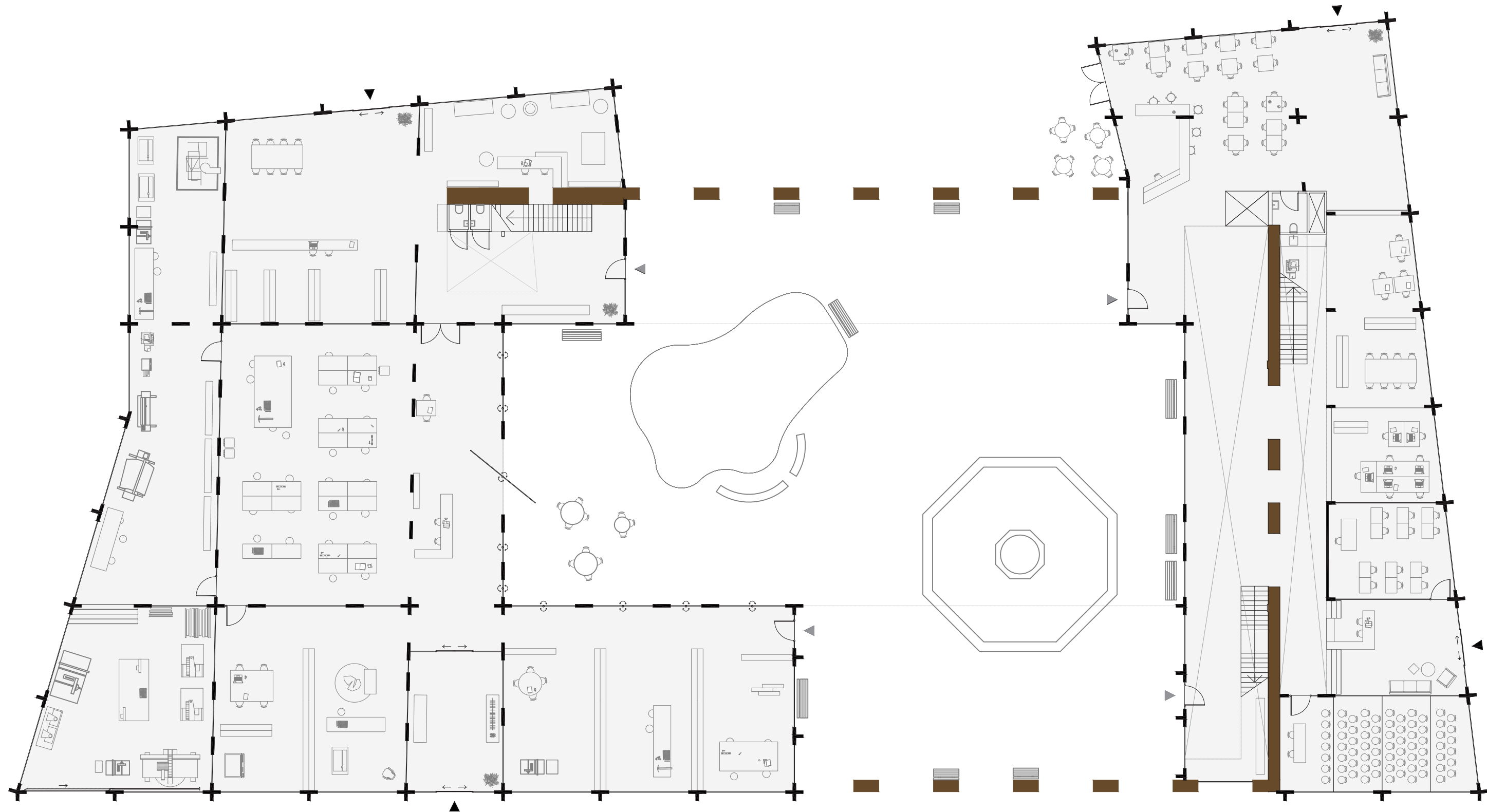
a housing and employment hub in Istanbul

This booklet contains the drawings of the final design of the contemporary khan. This was made for of an architectural graduation project at the faculty of Architecture at Delft University of Technology which was done as a final work to obtain the Master of Architecture. The project is part of the studio Design as Politics (2017-2018), within theme of the design studio: Migration - a city of comings and goings.

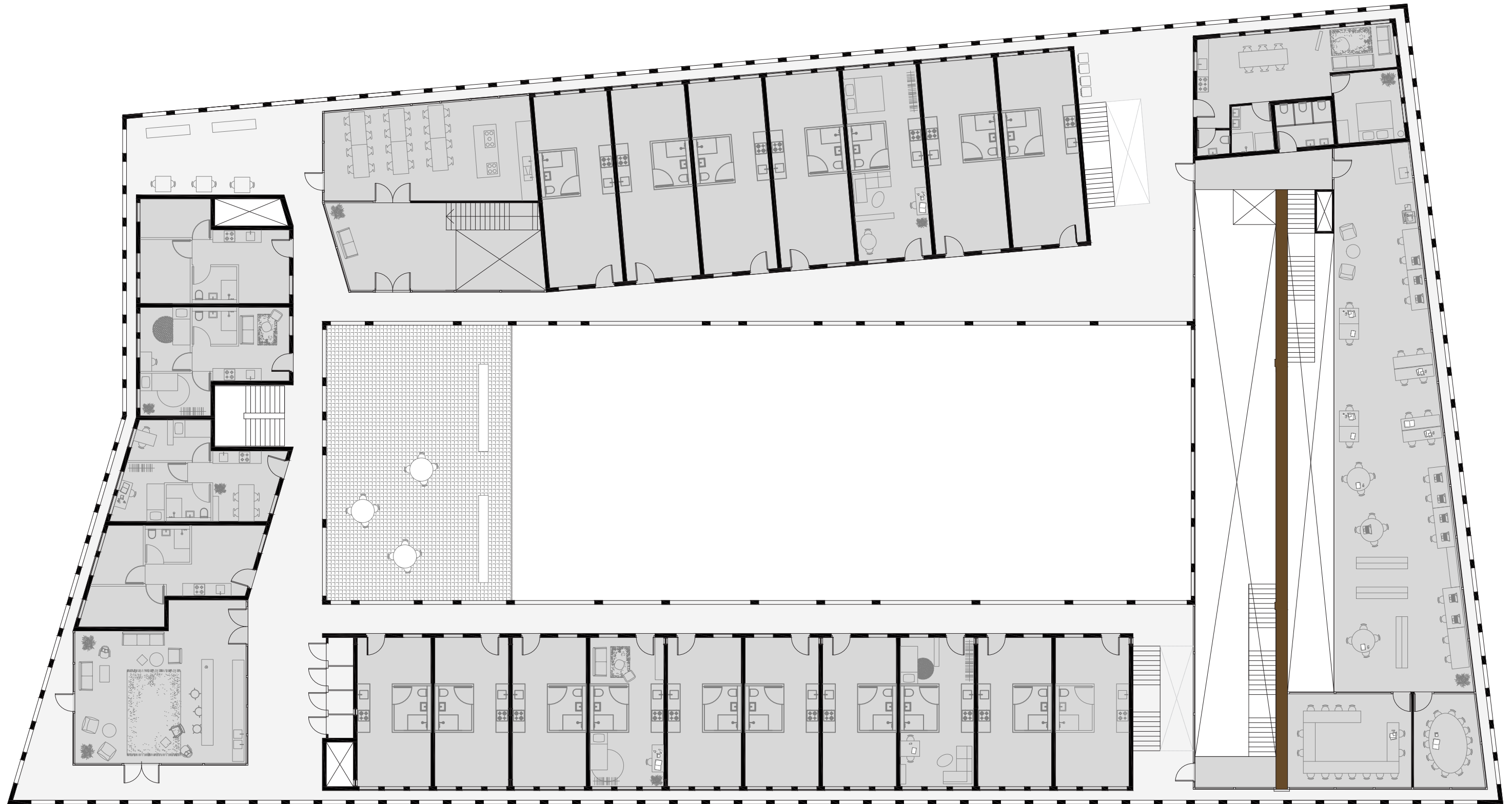


Products

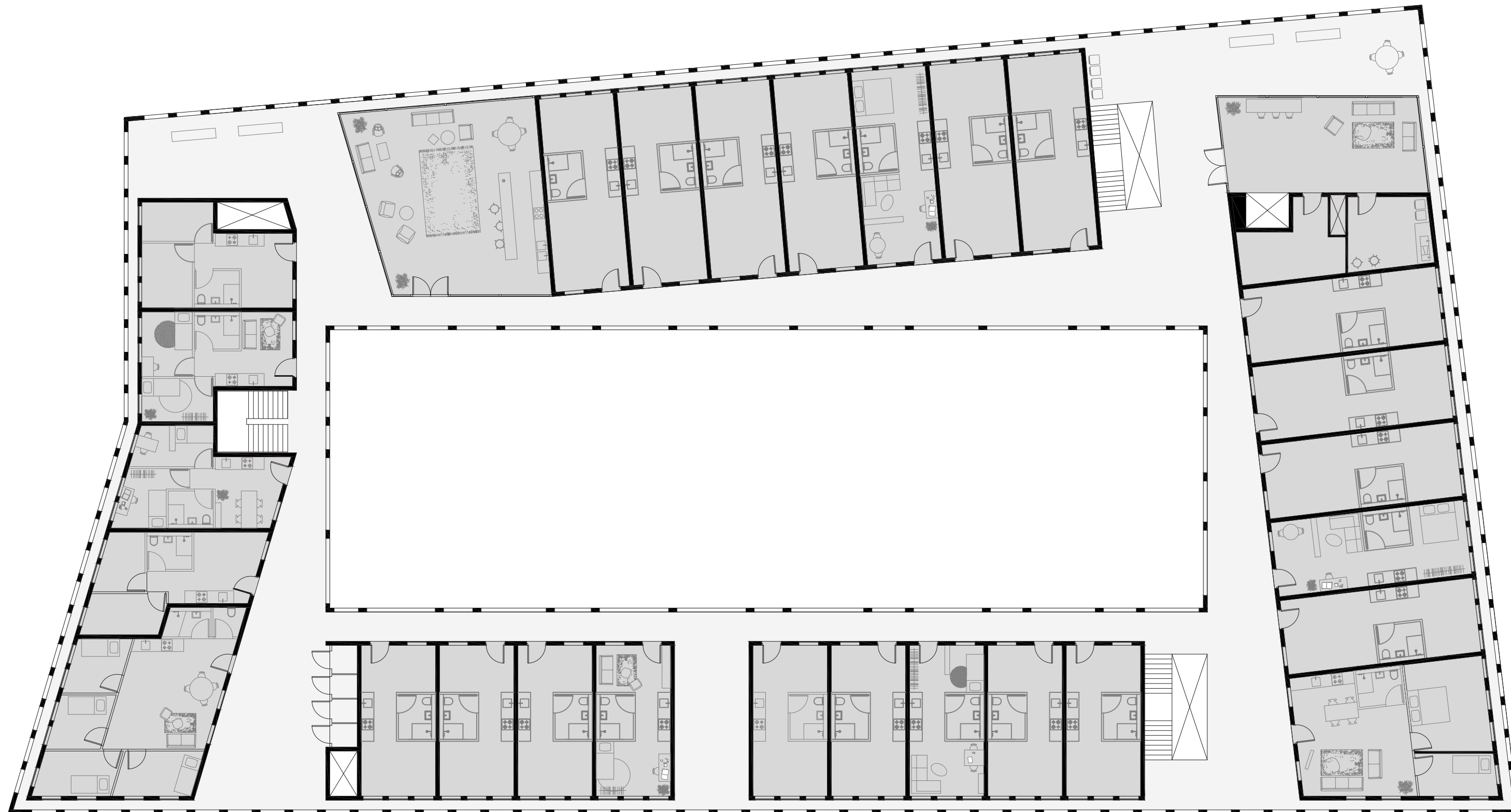
Plans	1:200
Façades	1:200
Sections	1:200
Facade fragment	1:100
Details	1:10
Principles	
Impressions	
Models	1:500 / 1:200 / 1:50



Ground floor
-900 / 0 / 500 mm
1:200

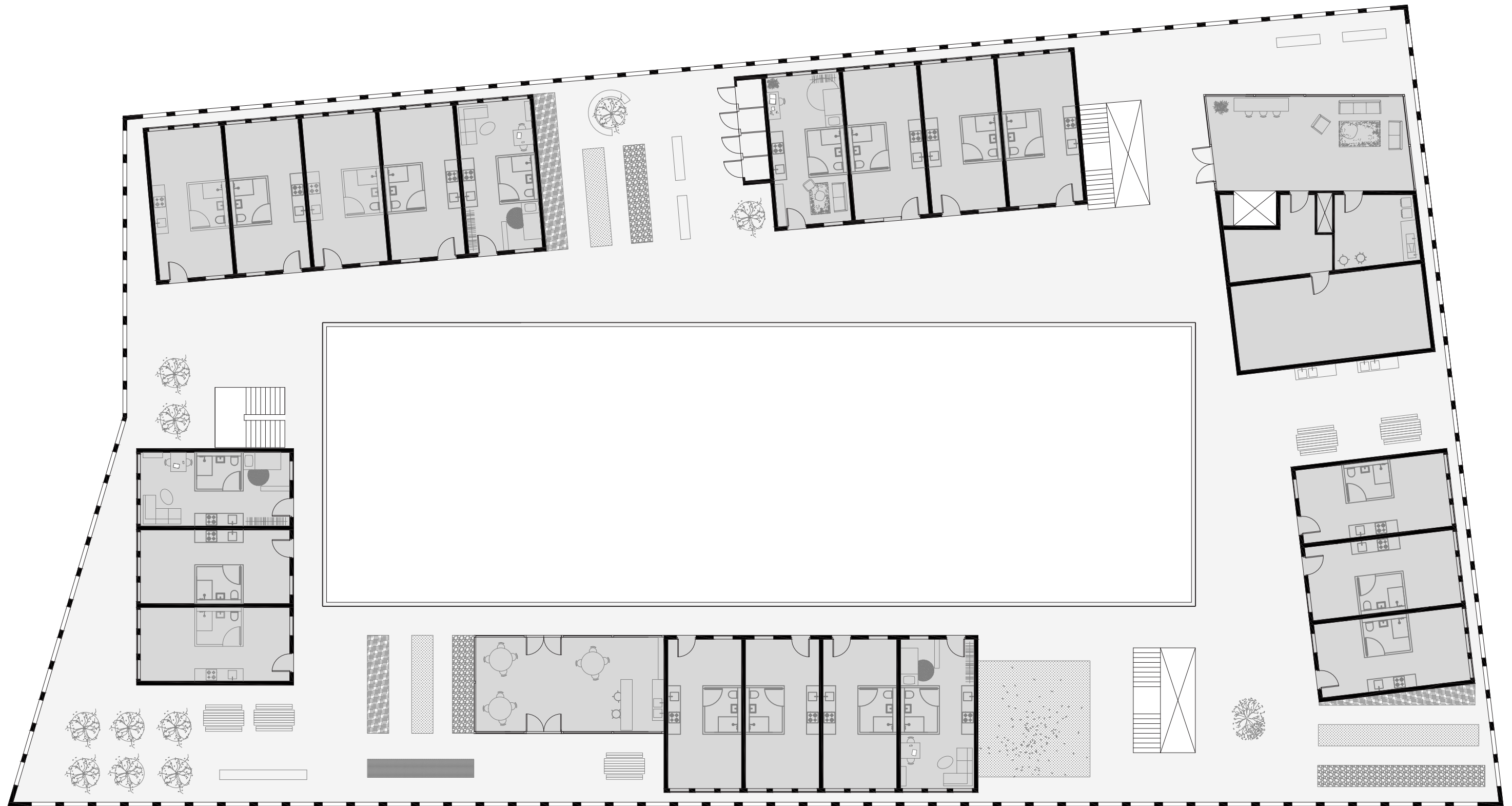


First floor
5700 mm
1:200



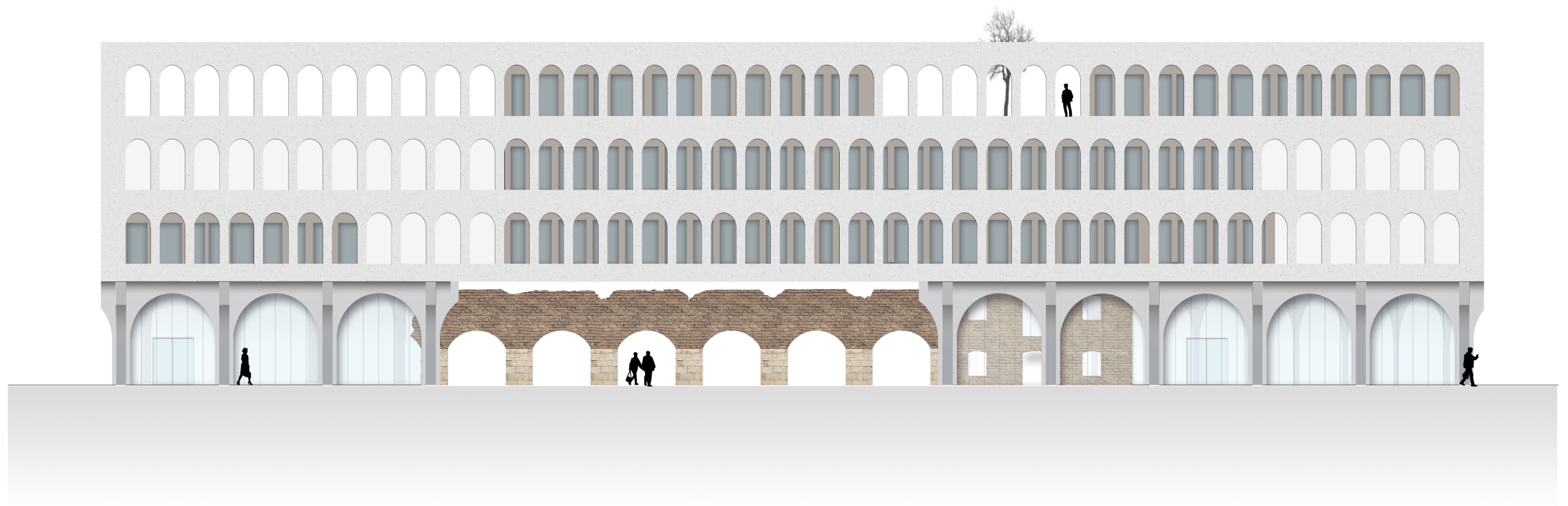
Second floor
9200 mm
1:200



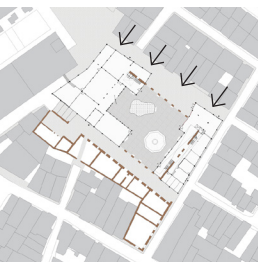


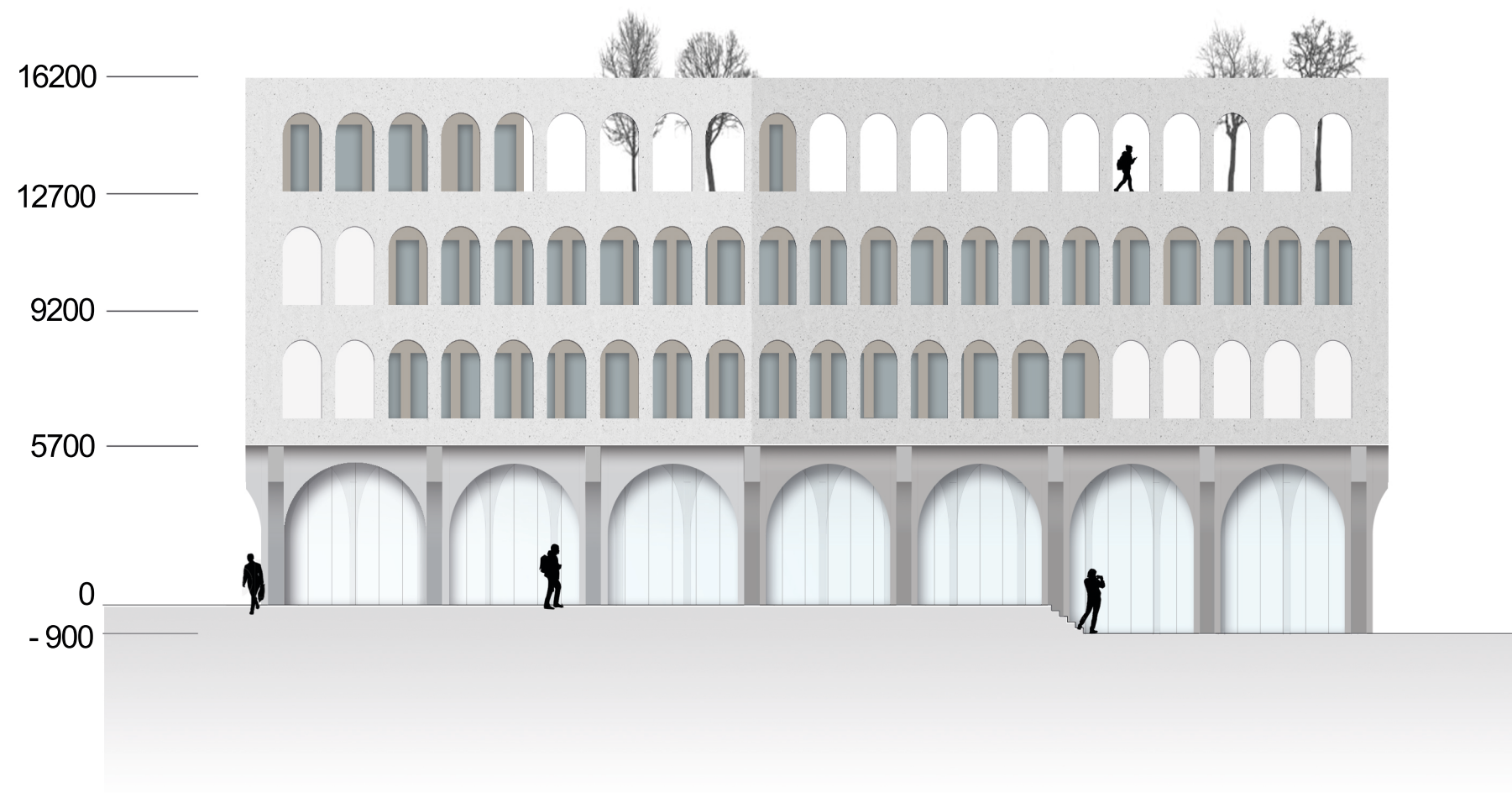
Third floor
12700 mm
1:200



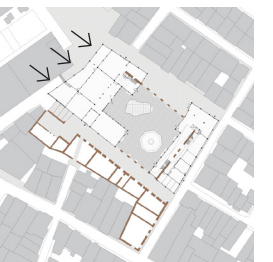


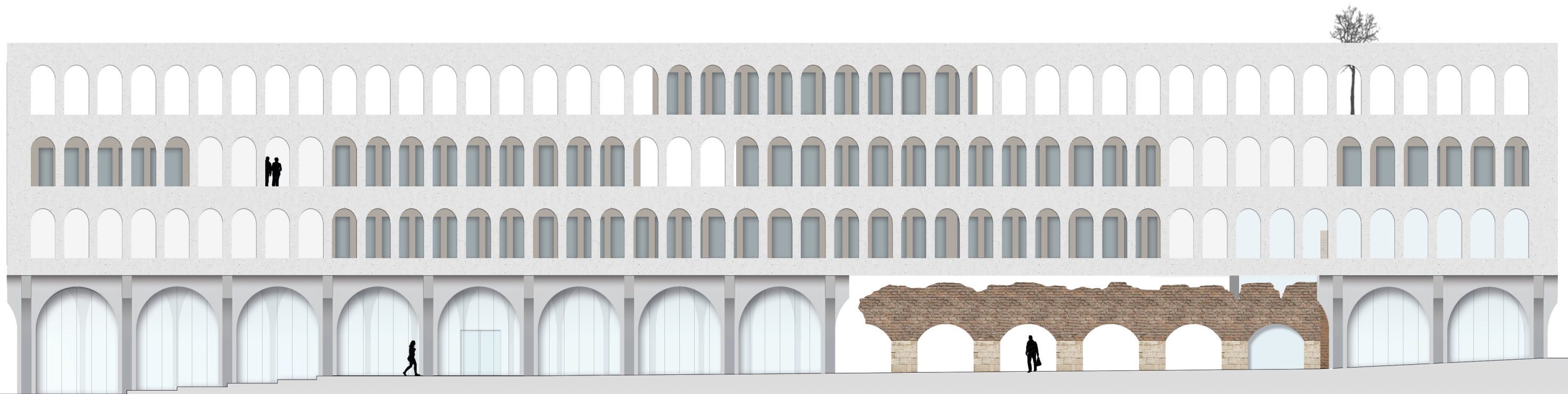
North-East Facade
1:200



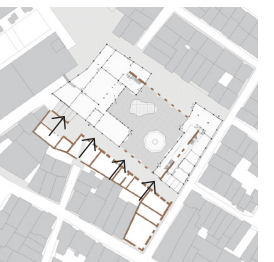


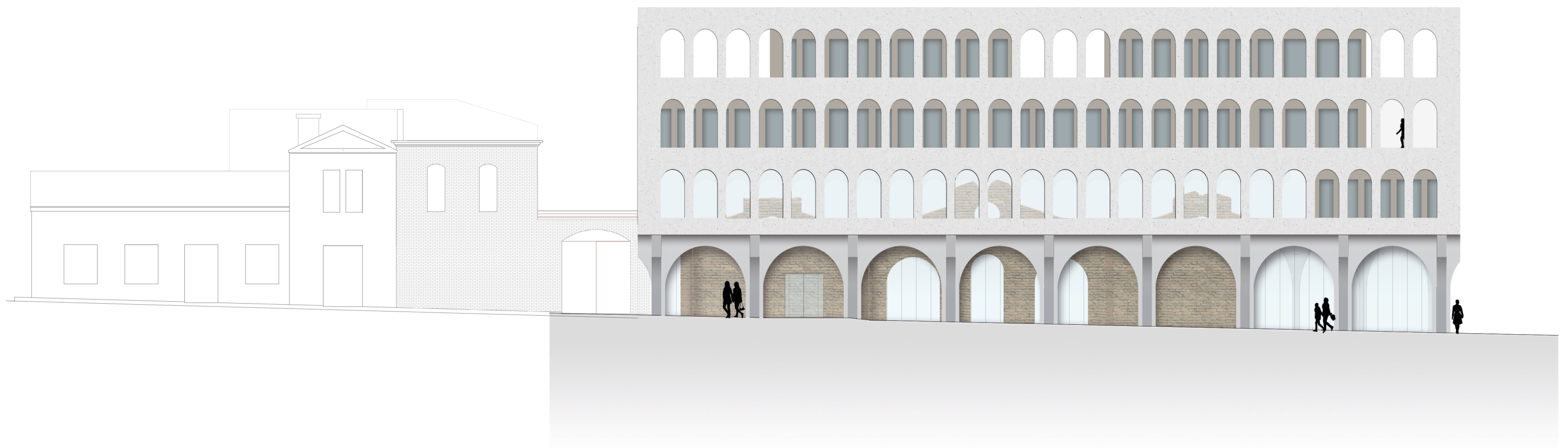
North-West Facade
1:200



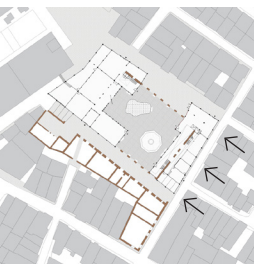


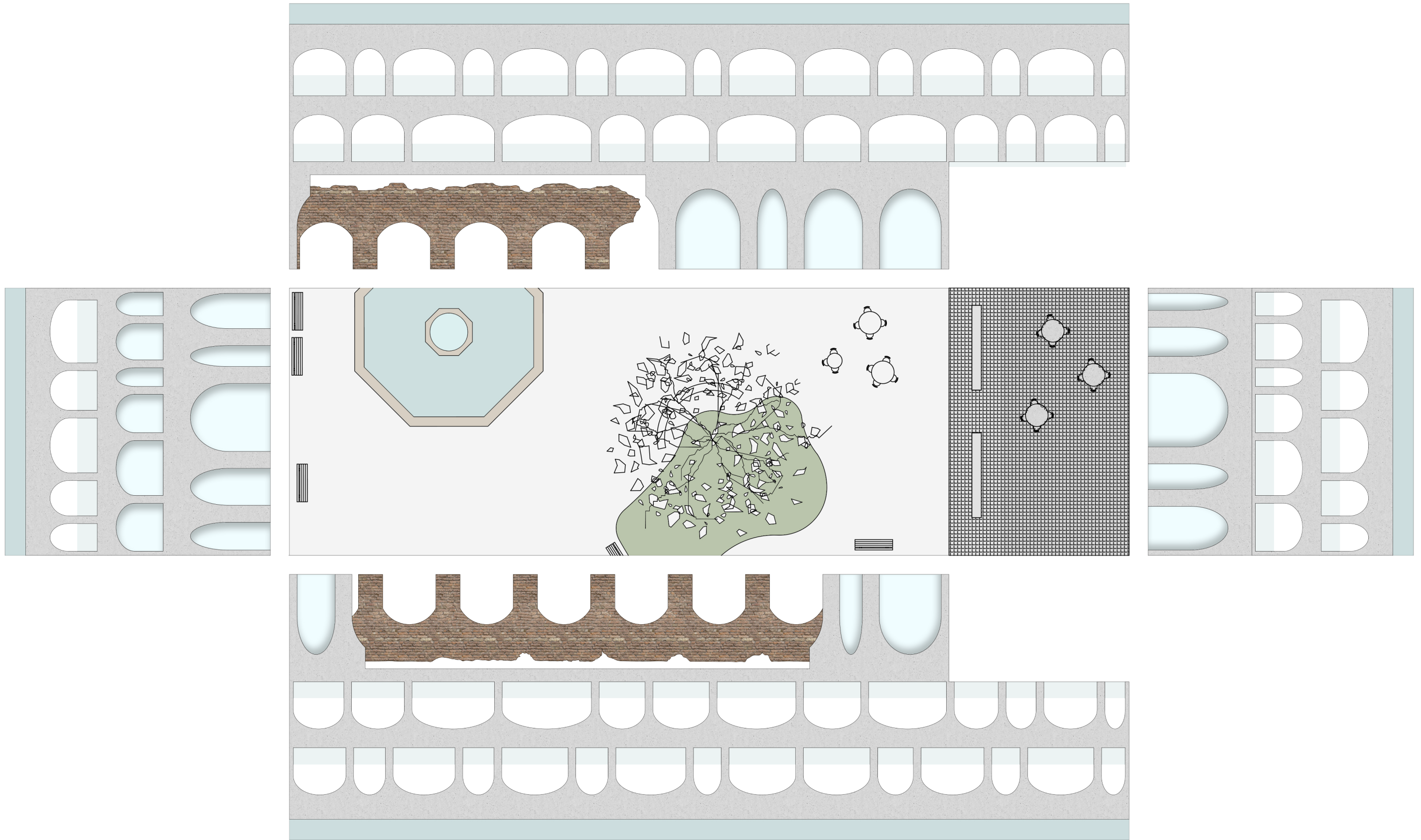
South-West Facade
1:200



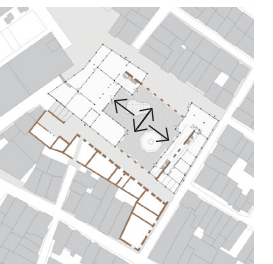


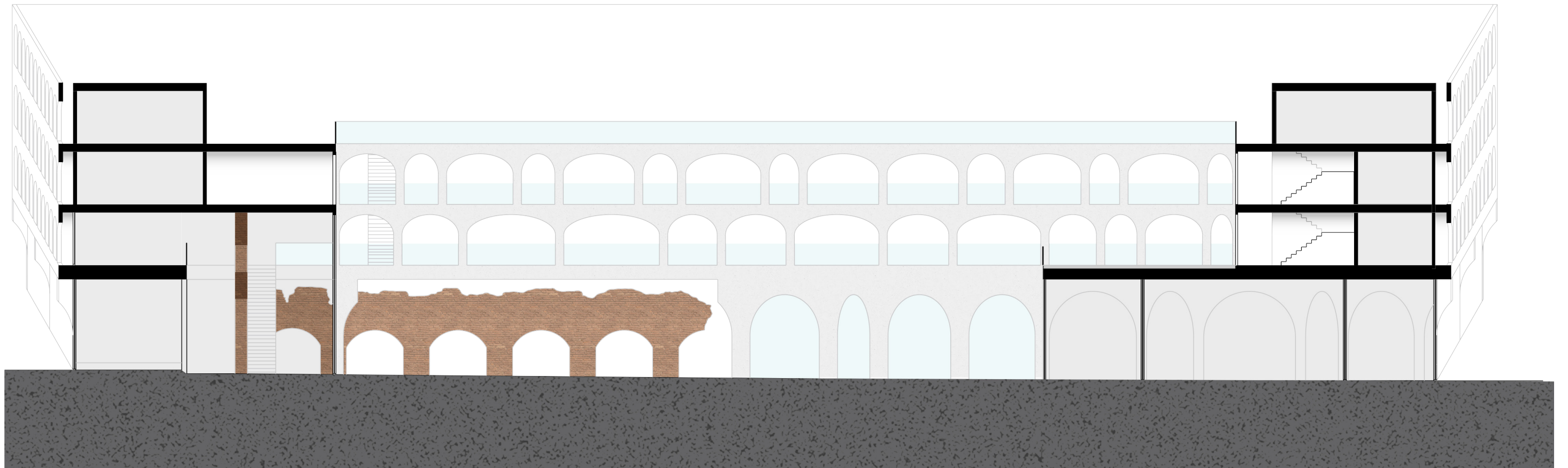
South-East Facade
1:200





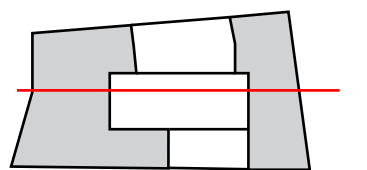
Innercourt Facades
1:200





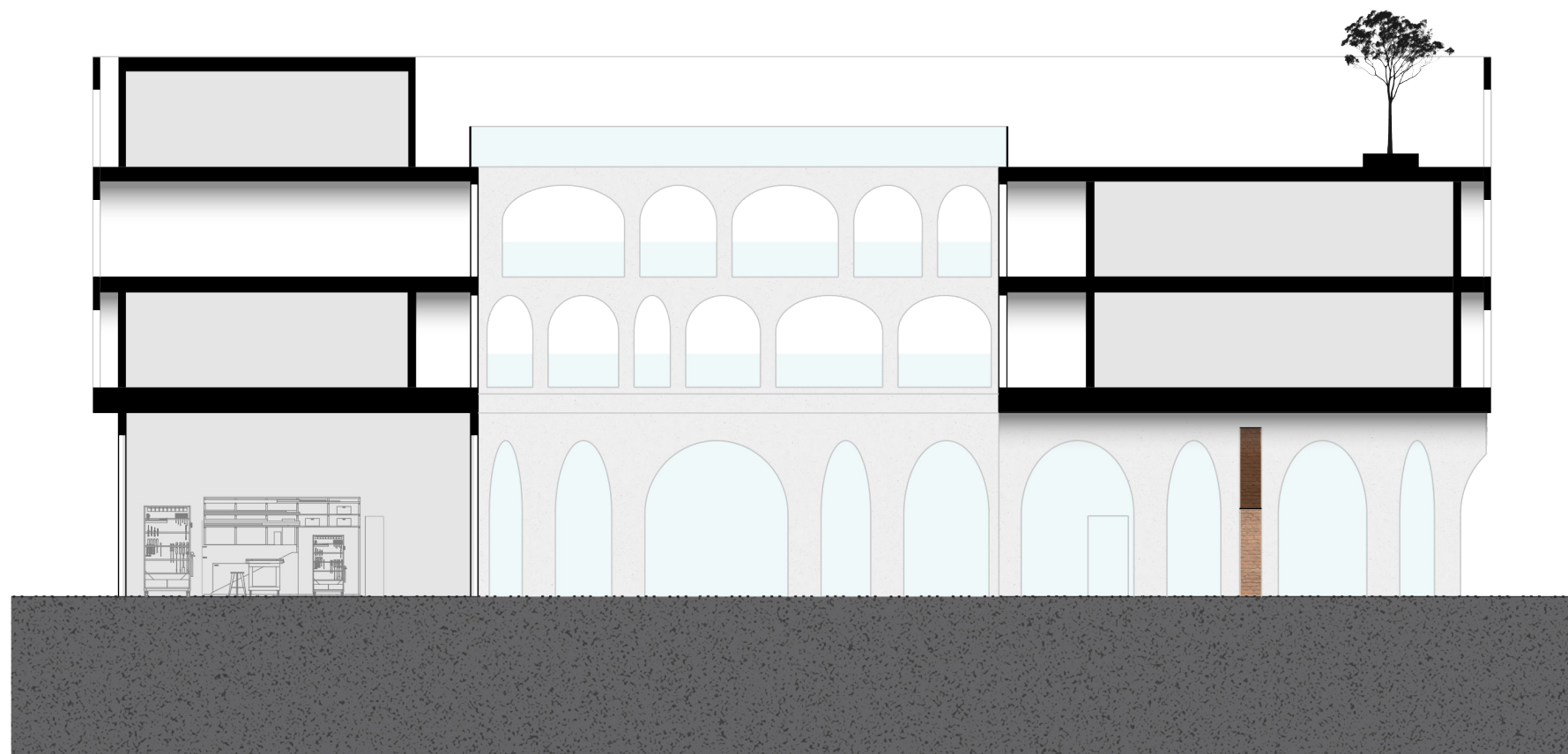
Section A-A

1:200



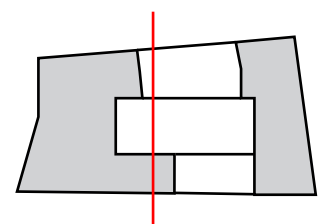


1:200.



Section C-C

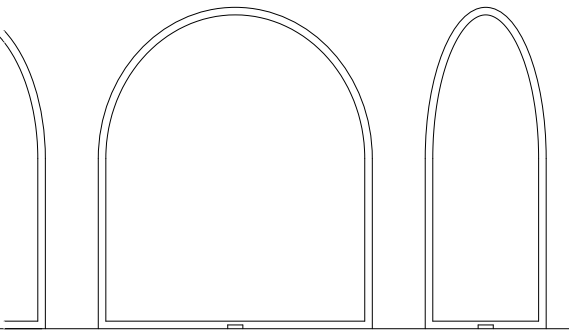
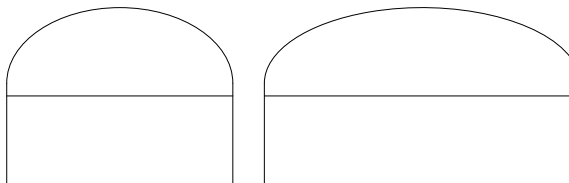
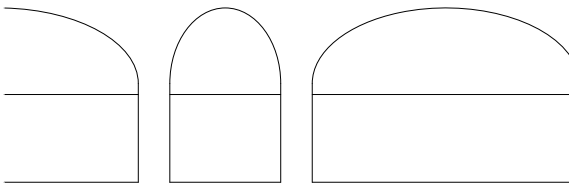
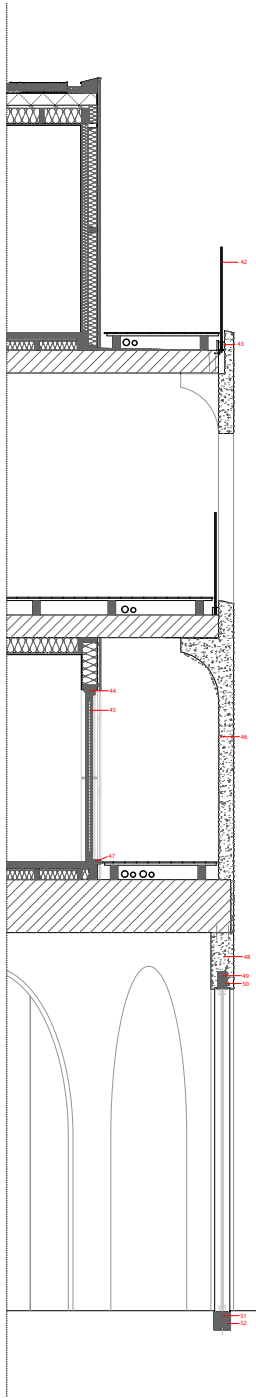
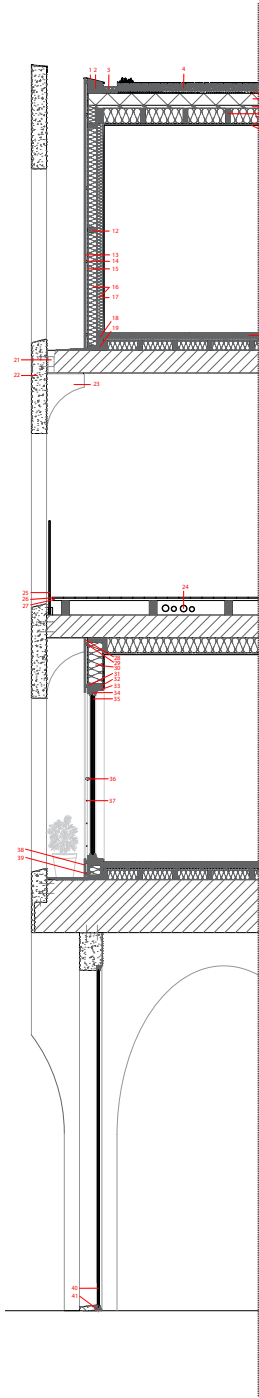
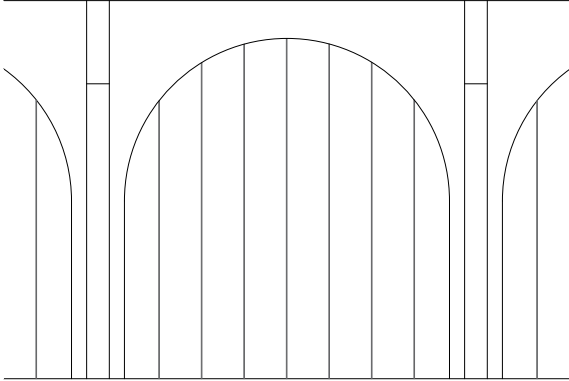
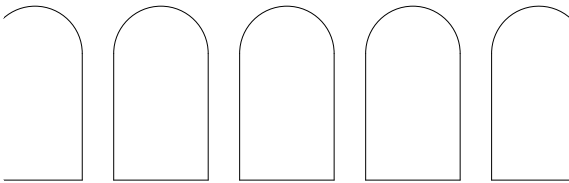
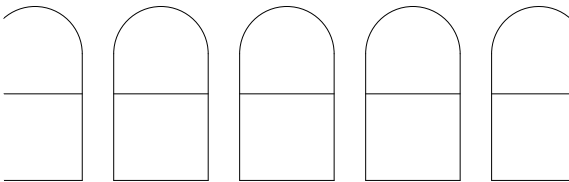
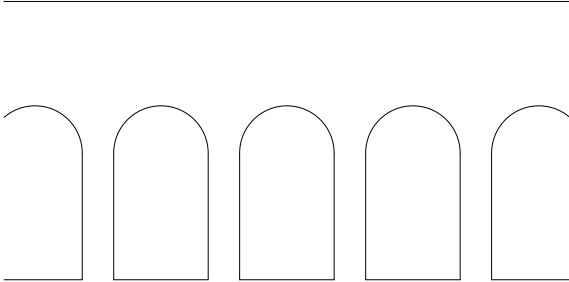
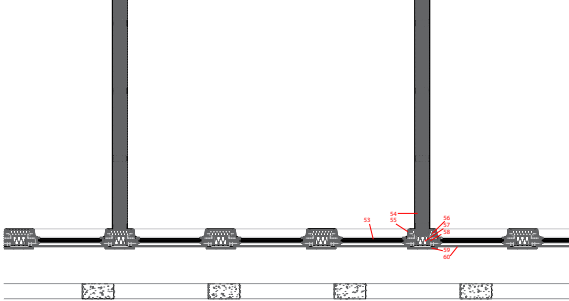
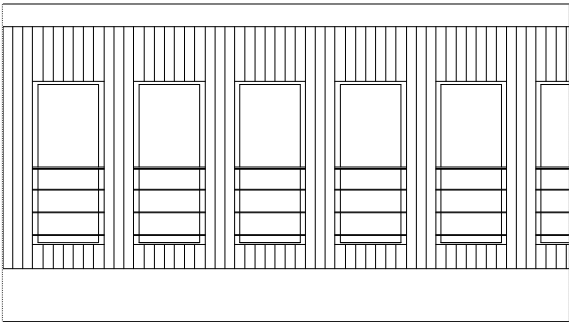
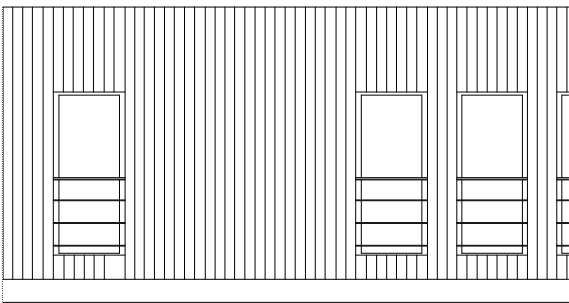
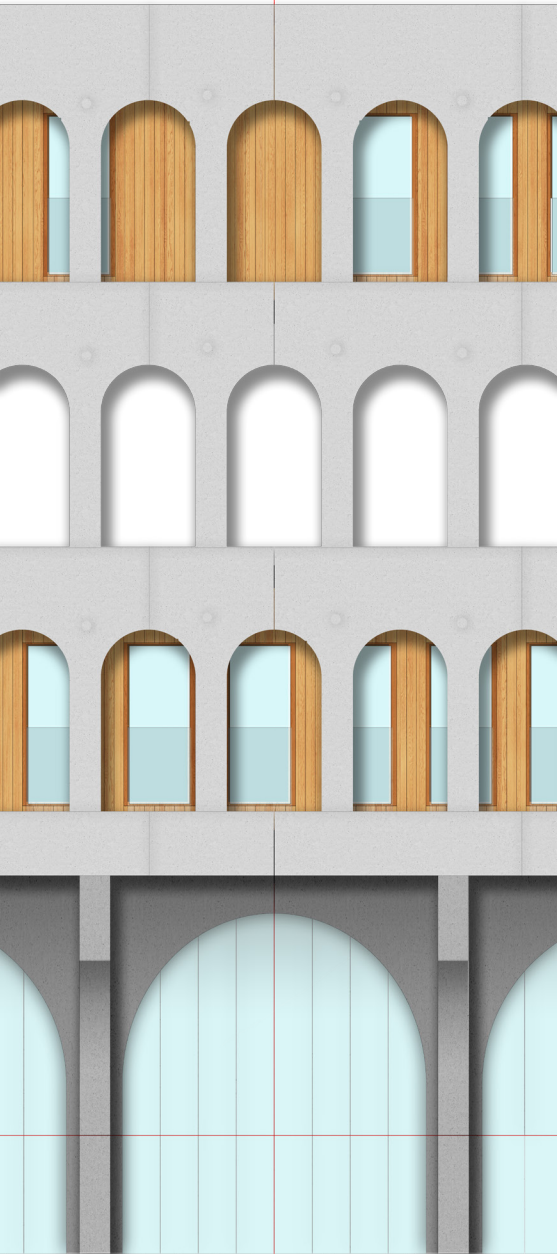
1:200





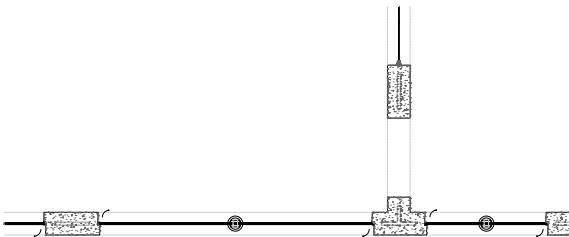
Facade fragments

1:100



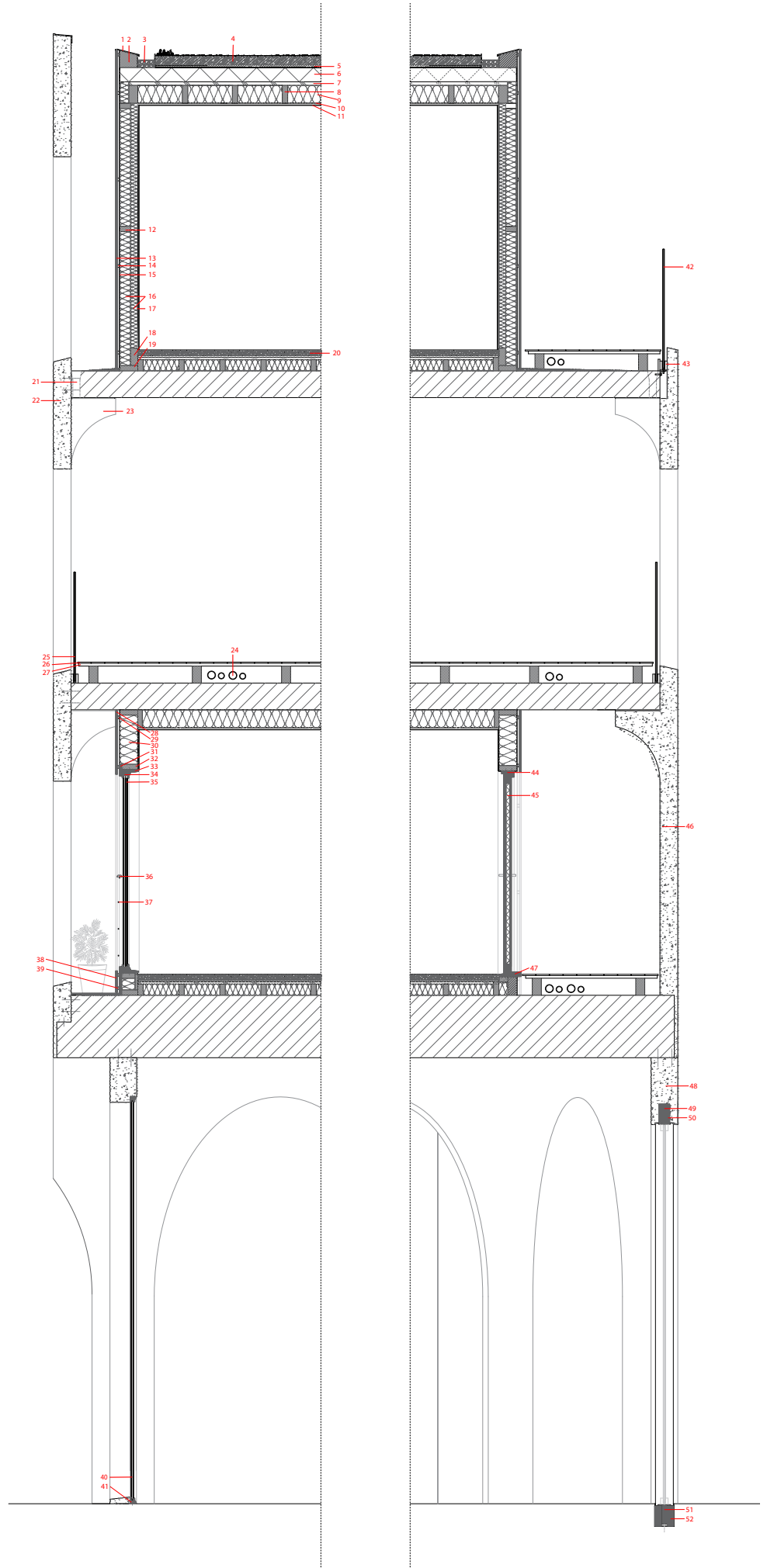
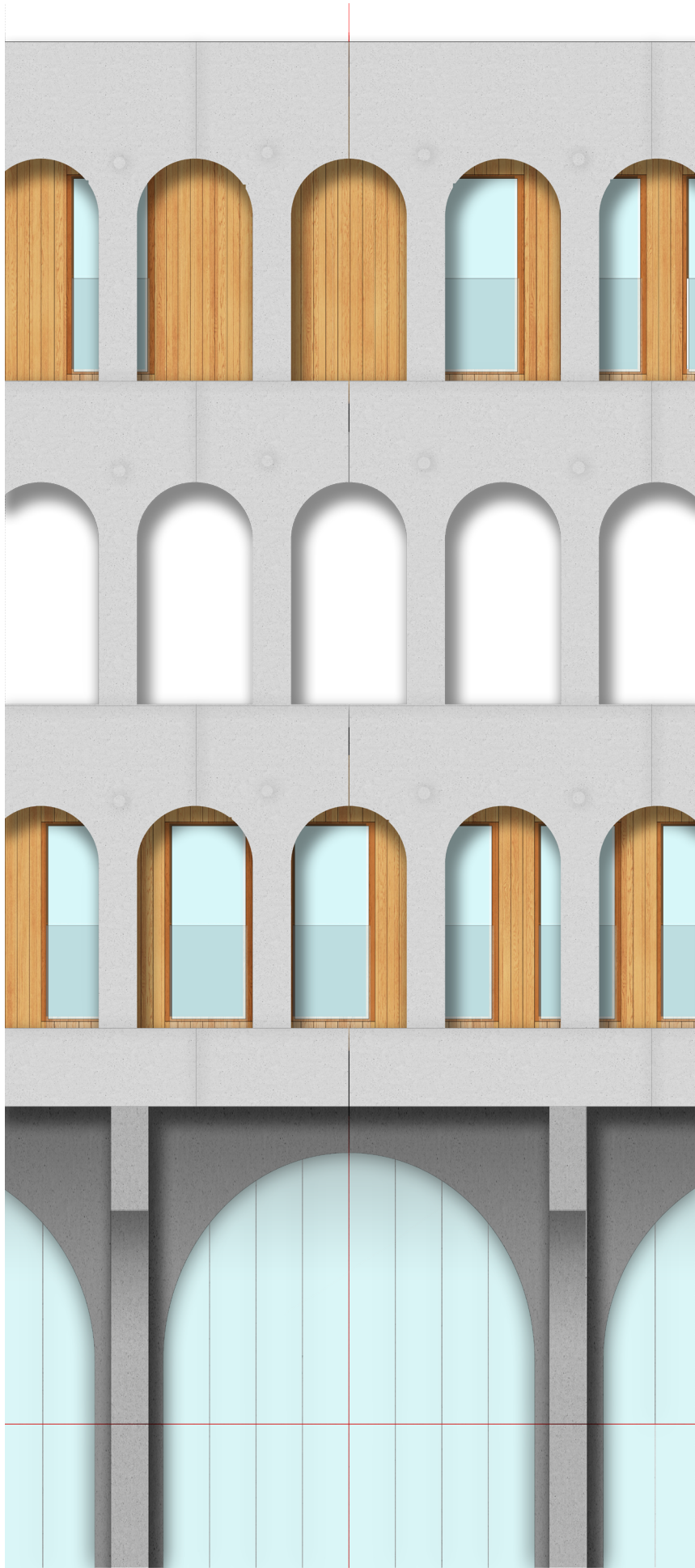
- Materials
numbered in red
1. Zinc roof trim with clips
 2. Non-structural wooden element for raised roof edge
 3. Zinc gutter filled with gravel for rainwater filtration
 4. Sedum layer
 5. Bituminous sealant (waterproof layer)
 6. Rigid foam insulation
 7. Wooden slab for support of foam insulation
 8. Structural beams (wood) for support of the roof construction
 9. Soft insulation - recycled fabrics
 10. Vapour barrier
 11. Plasterboard
 12. Wooden stud frame
 13. Vertically rebated wooden planks
 14. Wooden battens
 15. Waterproof layer
 16. Soft insulation - recycled fabrics
 17. Vapour barrier
 18. Wooden frame
 19. Wooden frame
 20. Casted concrete floor with heating system
 21. Spitter
 22. Polished concrete (reinforced) prefab facade elements
 23. Prefab concrete (reinforced) console
 24. Ventilation shafts and other piping
 25. Laminated glass balustrade (polished edge) - grouted
 26. Wooden floor boards
 27. Wooden sleepers
 28. Vertically rebated wooden planks
 29. Wooden battens
 30. Soft insulation - recycled fabrics
 31. Wooden plank
 32. Wooden construction frame
 33. Wooden mounting frame
 34. Wooden window frame
 35. HR ++ glazing
 36. Wooden handrail
 37. Steel cable
 38. Vertically rebated wooden planks
 39. Wooden battens
 40. Safety glazing
 41. Wooden window frame
 42. Laminated glass balustrade (polished edge) - grouted
 43. Steel channel (balustrade)
 44. Wooden window frame
 45. Wooden door with rigid foam insulation
 46. Polished concrete (reinforced) pre-fab column
 47. Wooden window frame
 48. Polished pre-fab (reinforced) concrete facade element

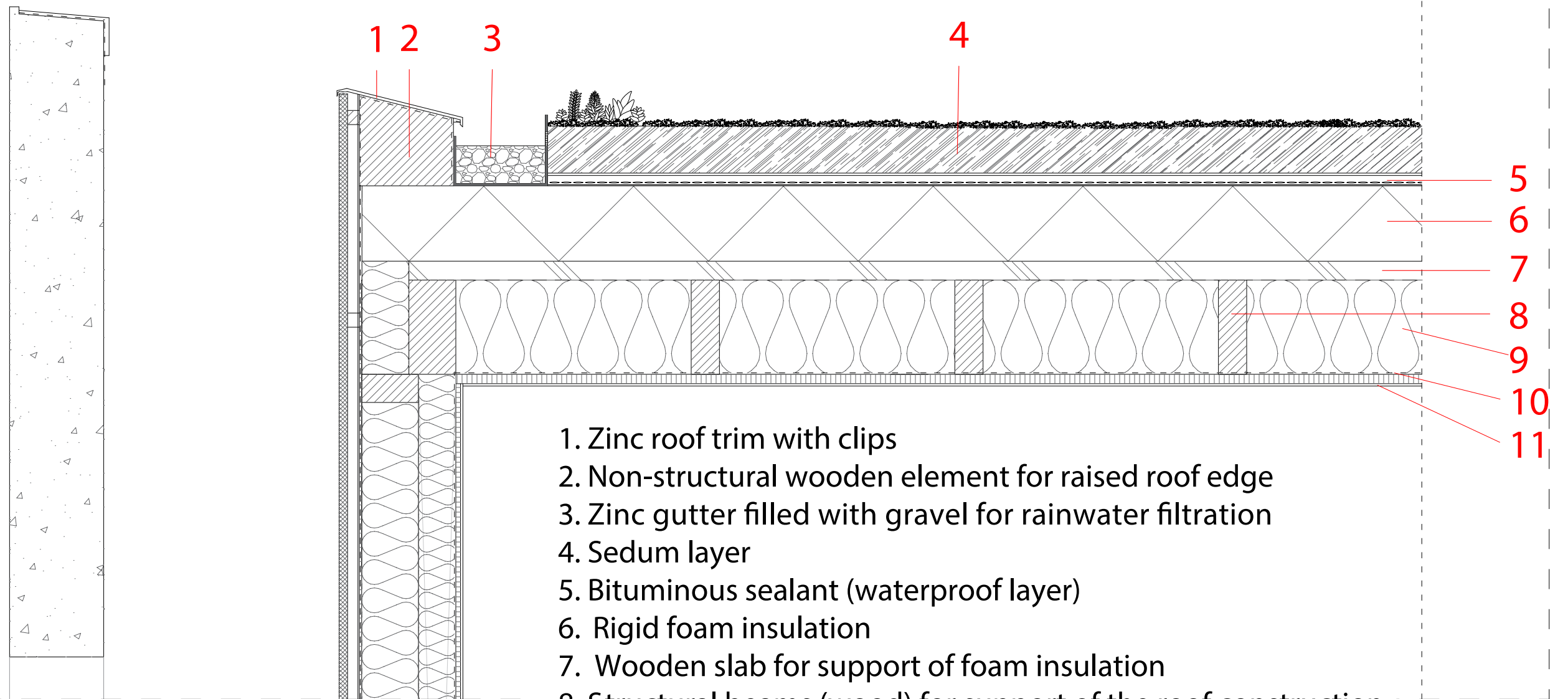
49. Pivot door steel construction
50. Steel channel
51. Pivot door steel construction
52. Steel channel
53. HR ++ glazing
54. Wooden stud interior wall with acoustic insulation
55. Wooden window frame
56. Metal connection elements
57. Soft insulation - recycled fabrics
58. Wooden battens
59. Vertically rebated wooden planks
60. Steel channel (balustrade)
61. Polished concrete (reinforced) pre-fab column
62. Wooden window frame
63. Safety glazing



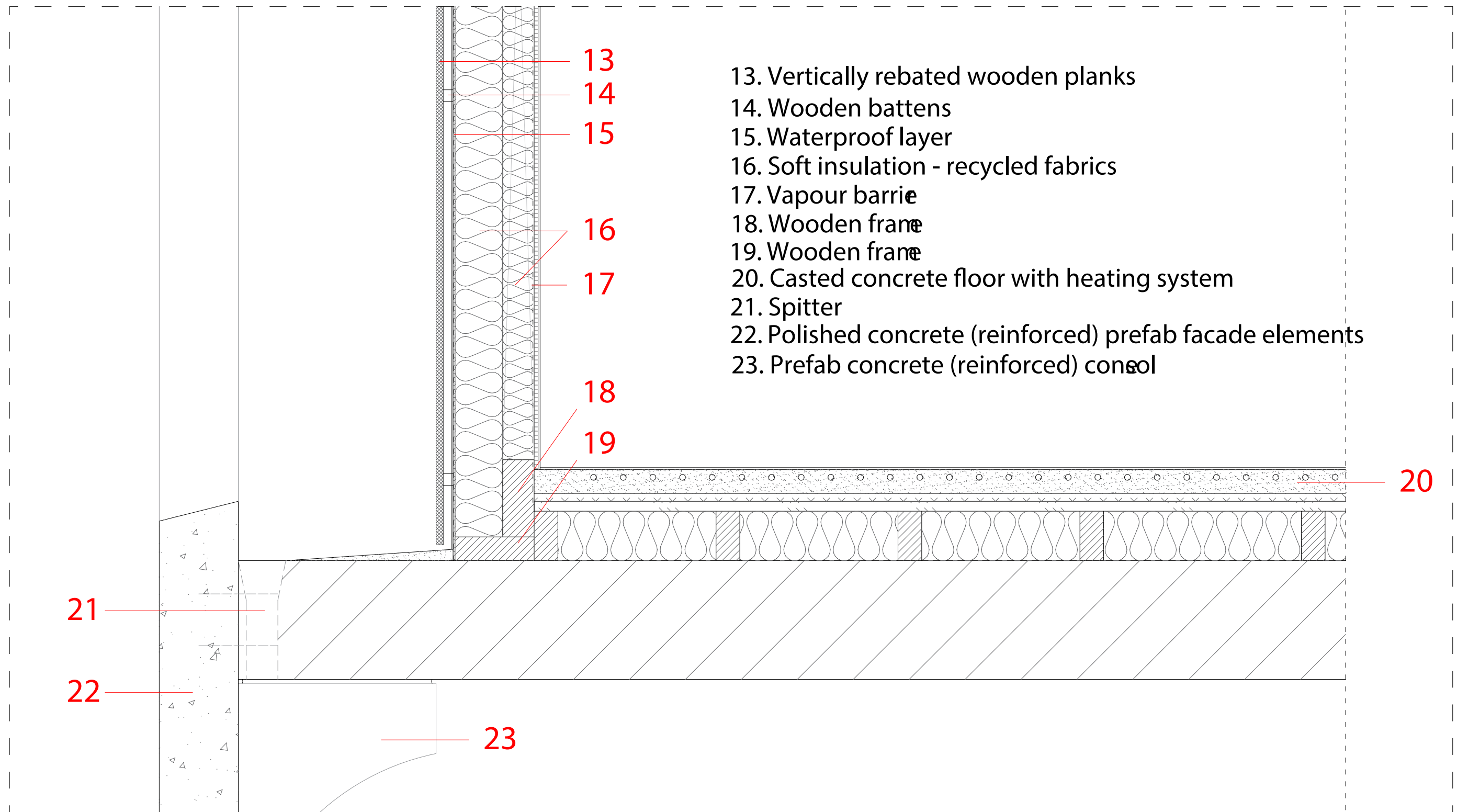
Materials
numbered in red

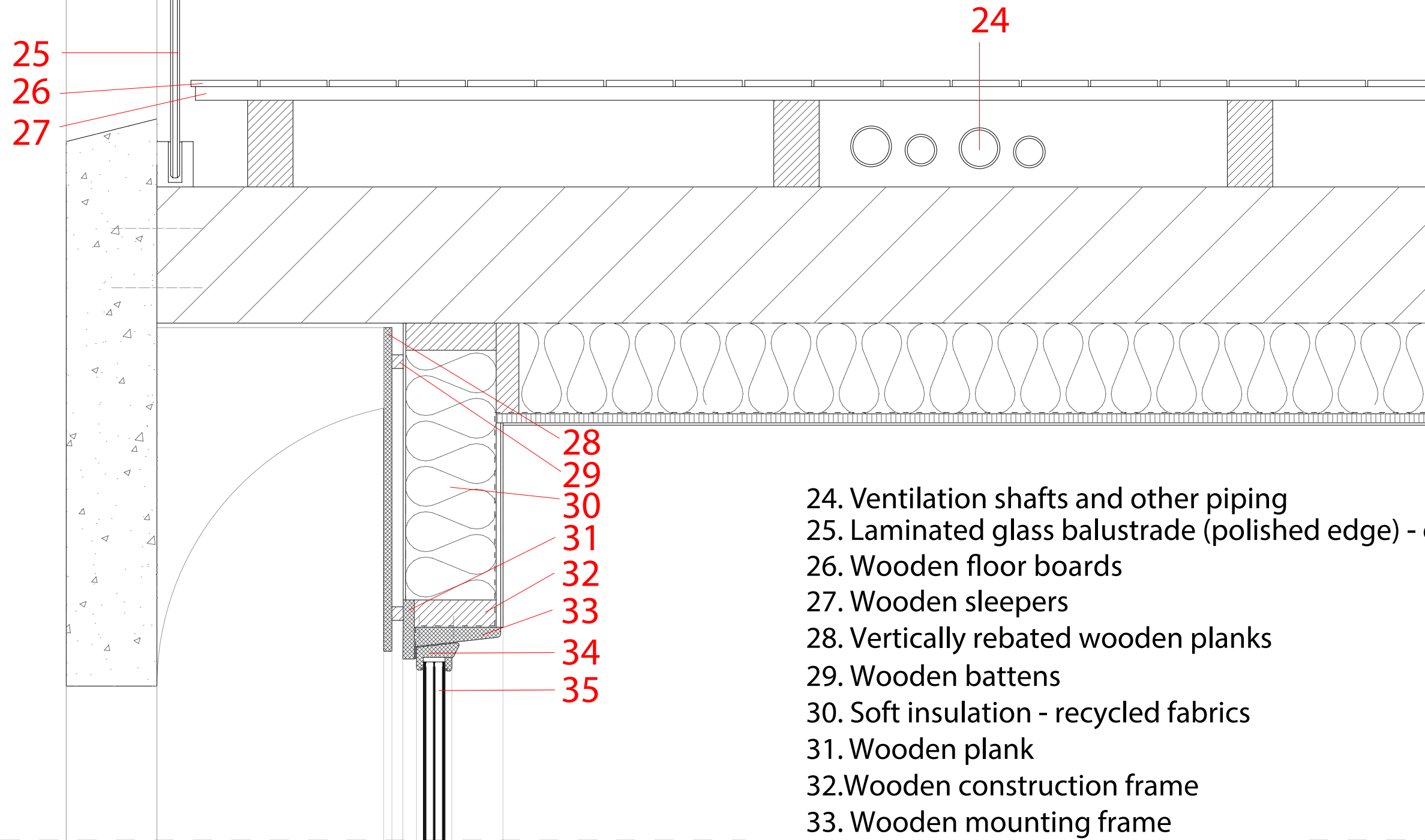
1. Zinc roof trim with clips
2. Non-structural wooden element for raised roof edge
3. Zinc gutter filled with gravel for rainwater filtration
4. Sedum layer
5. Bituminous sealant (waterproof layer)
6. Rigid foam insulation
7. Wooden slab for support of foam insulation
8. Structural beams (wood) for support of the roof construction
9. Soft insulation - recycled fabrics
10. Vapour barrier
11. Plasterboard
12. Wooden stud frame
13. Vertically rebated wooden planks
14. Wooden battens
15. Waterproof layer
16. Soft insulation - recycled fabrics
17. Vapour barrier
18. Wooden frame
19. Wooden frame
20. Casted concrete floor with heating system
21. Spitter
22. Polished concrete (reinforced) prefab facade elements
23. Prefab concrete (reinforced) console
24. Ventilation shafts and other piping
25. Laminated glass balustrade (polished edge) - grouted
26. Wooden floor boards
27. Wooden sleepers
28. Vertically rebated wooden planks
29. Wooden battens
30. Soft insulation - recycled fabrics
31. Wooden plank
32. Wooden construction frame
33. Wooden mounting frame
34. Wooden window frame
35. HR ++ glazing
36. Wooden handrail
37. Steel cable
38. Vertically rebated wooden planks
39. Wooden battens
40. Safety glazing
41. Wooden window frame
42. Laminated glass balustrade (polished edge) - grouted
43. Steel channel (balustrade)
44. Wooden window frame
45. Wooden door with rigid foam insulation
46. Polished concrete (reinforced) pre-fab column
47. Wooden window frame
48. Polished pre-fab (reinforced) concrete facade element
49. Pivot door steel construction
50. Steel channel
51. Pivot door steel construction
52. Steel channel
53. HR ++ glazing
54. Wooden stud interior wall with acoustic insulation
55. Wooden window frame
56. Metal connection elements
57. Soft insulation - recycled fabrics
58. Wooden battens
59. Vertically rebated wooden planks
60. Steel channel (balustrade)
61. Polished concrete (reinforced) pre-fab column
62. Wooden window frame
63. Safety glazing





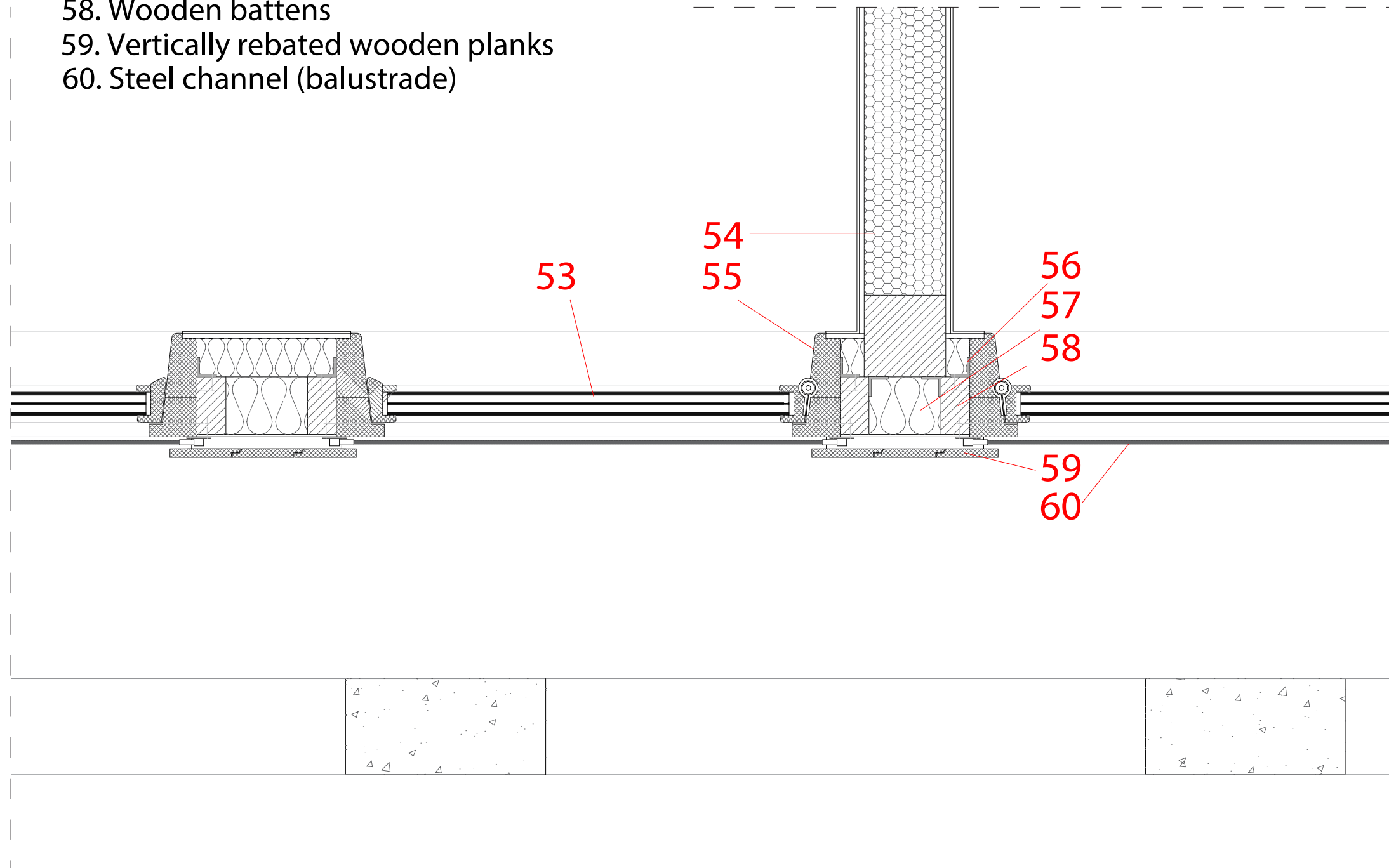
1. Zinc roof trim with clips
2. Non-structural wooden element for raised roof edge
3. Zinc gutter filled with gravel for rainwater filtration
4. Sedum layer
5. Bituminous sealant (waterproof layer)
6. Rigid foam insulation
7. Wooden slab for support of foam insulation
8. Structural beams (wood) for support of the roof construction
9. Soft insulation - recycled fabrics
10. Vapour barrier
11. Plasterboard

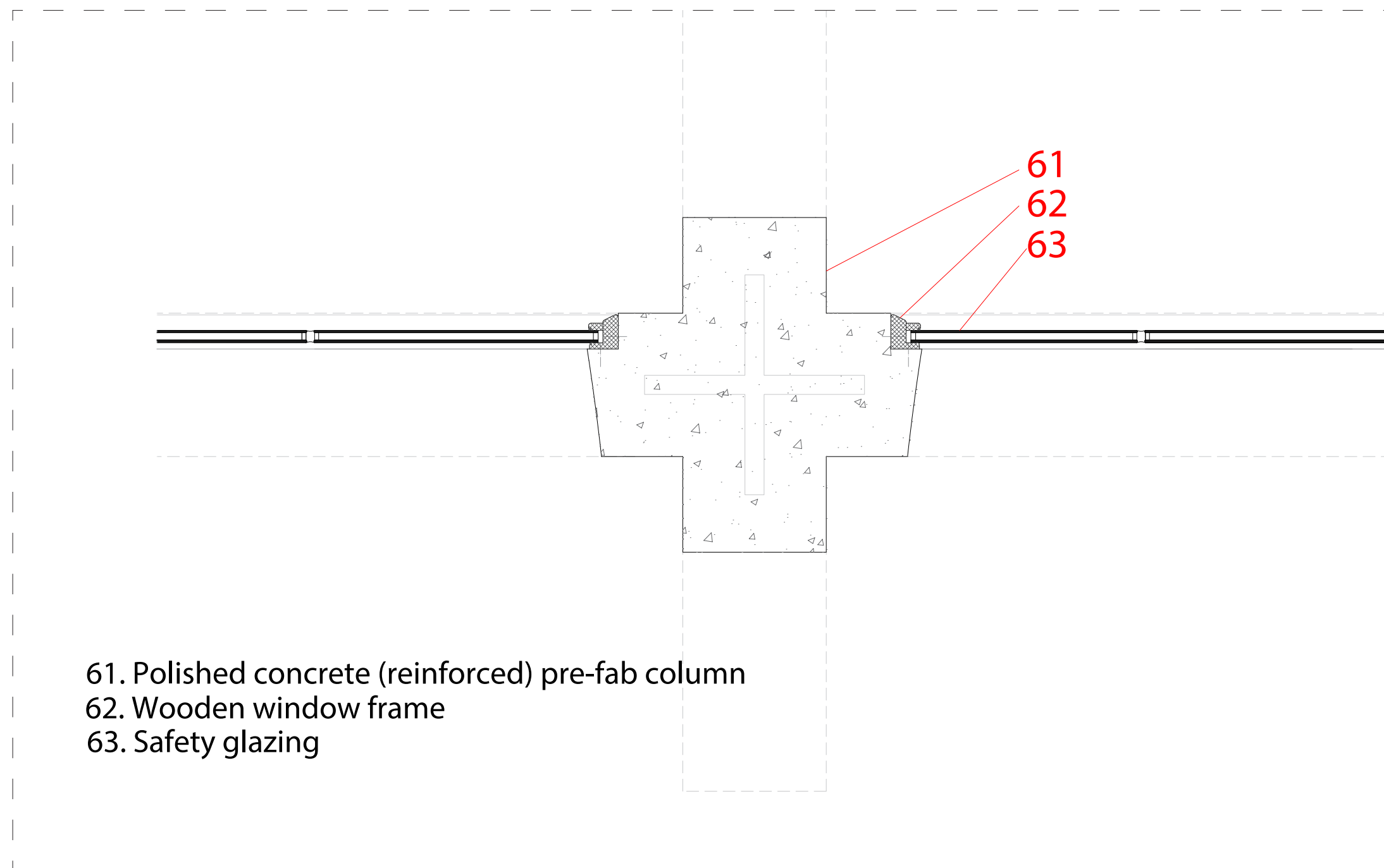


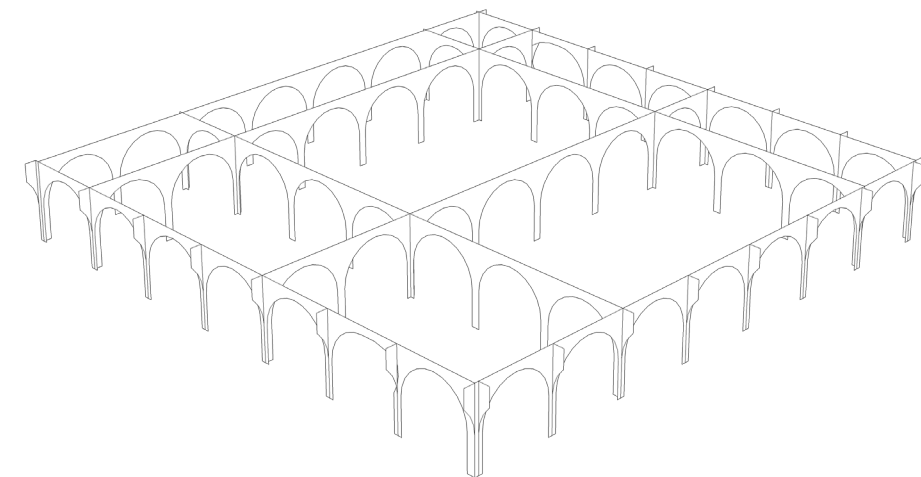
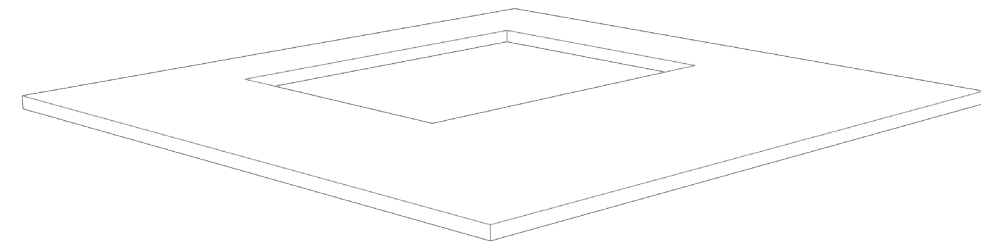
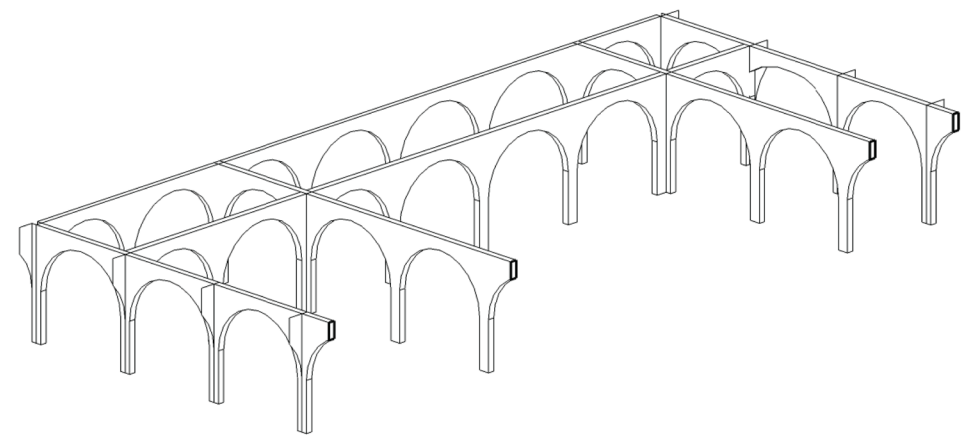
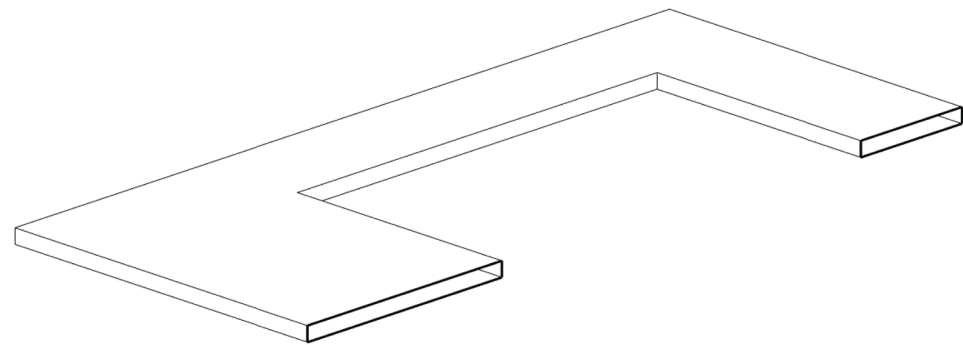
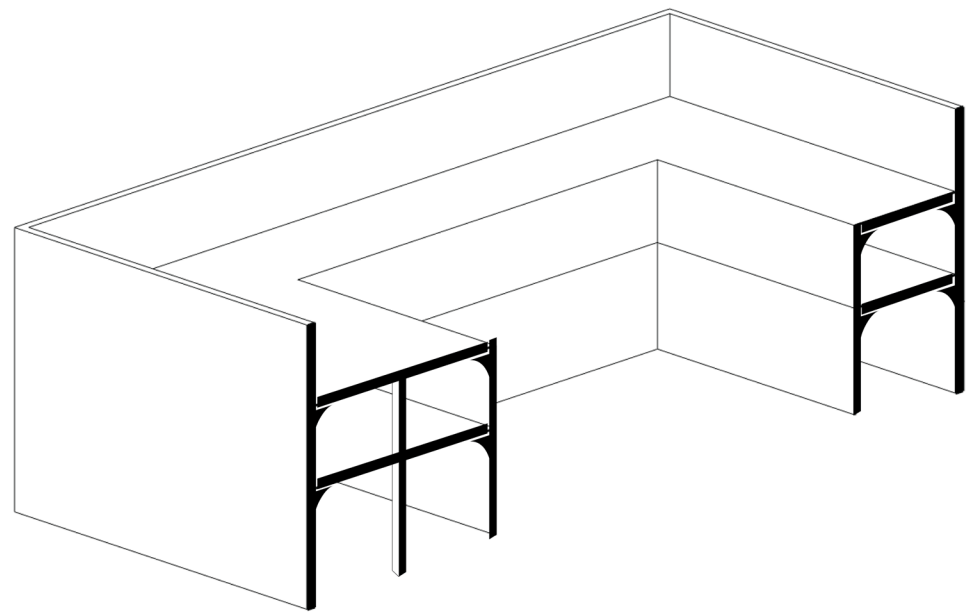


- 24. Ventilation shafts and other piping
- 25. Laminated glass balustrade (polished edge) - grouted
- 26. Wooden floor boards
- 27. Wooden sleepers
- 28. Vertically rebated wooden planks
- 29. Wooden battens
- 30. Soft insulation - recycled fabrics
- 31. Wooden plank
- 32. Wooden construction frame
- 33. Wooden mounting frame
- 34. Wooden window frame
- 35. HR ++ glazing

- 53. HR ++ glazing
- 54. Wooden stud interior wall with acoustic insulation
- 55. Wooden window frame
- 56. Metal connection elements
- 57. Soft insulation - recycled fabrics
- 58. Wooden battens
- 59. Vertically rebated wooden planks
- 60. Steel channel (balustrade)

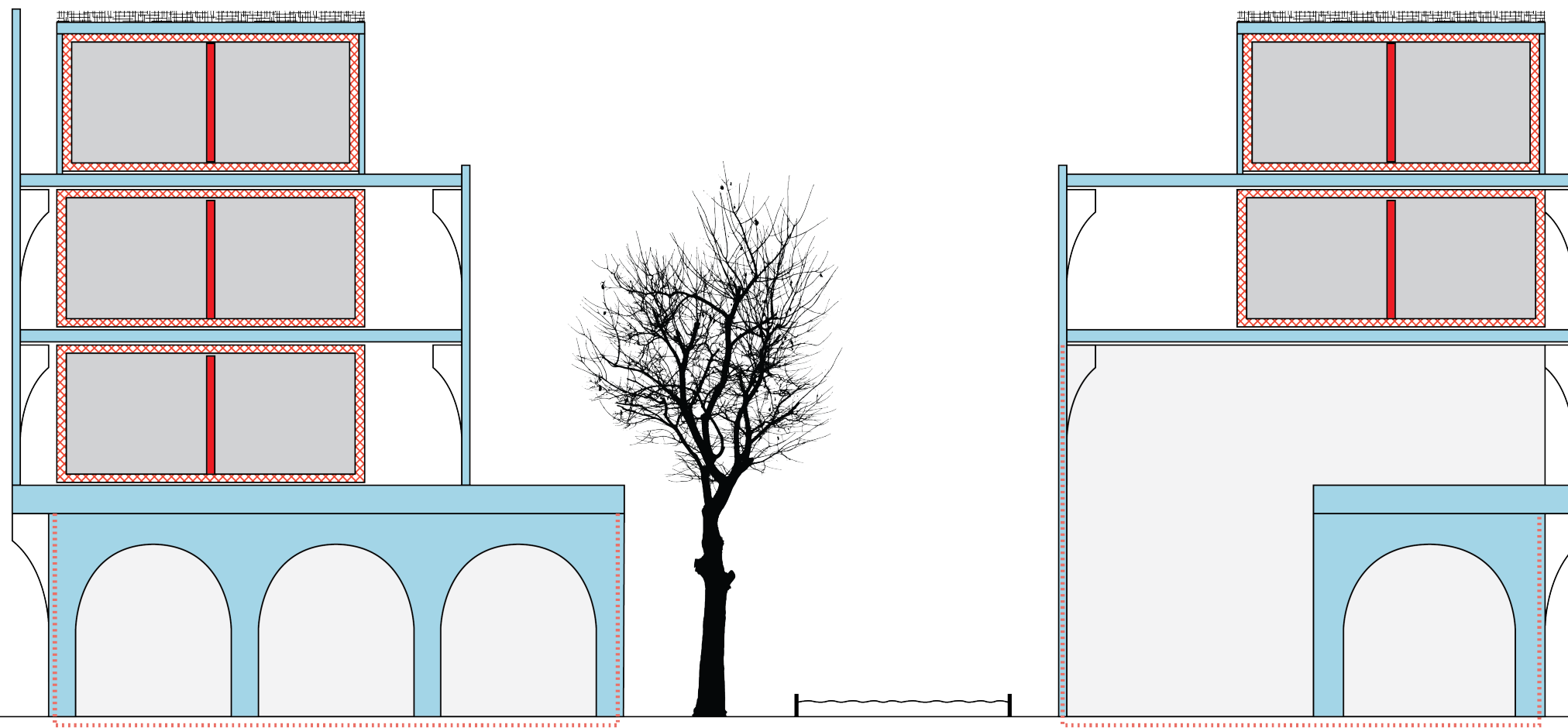






Constructual principle

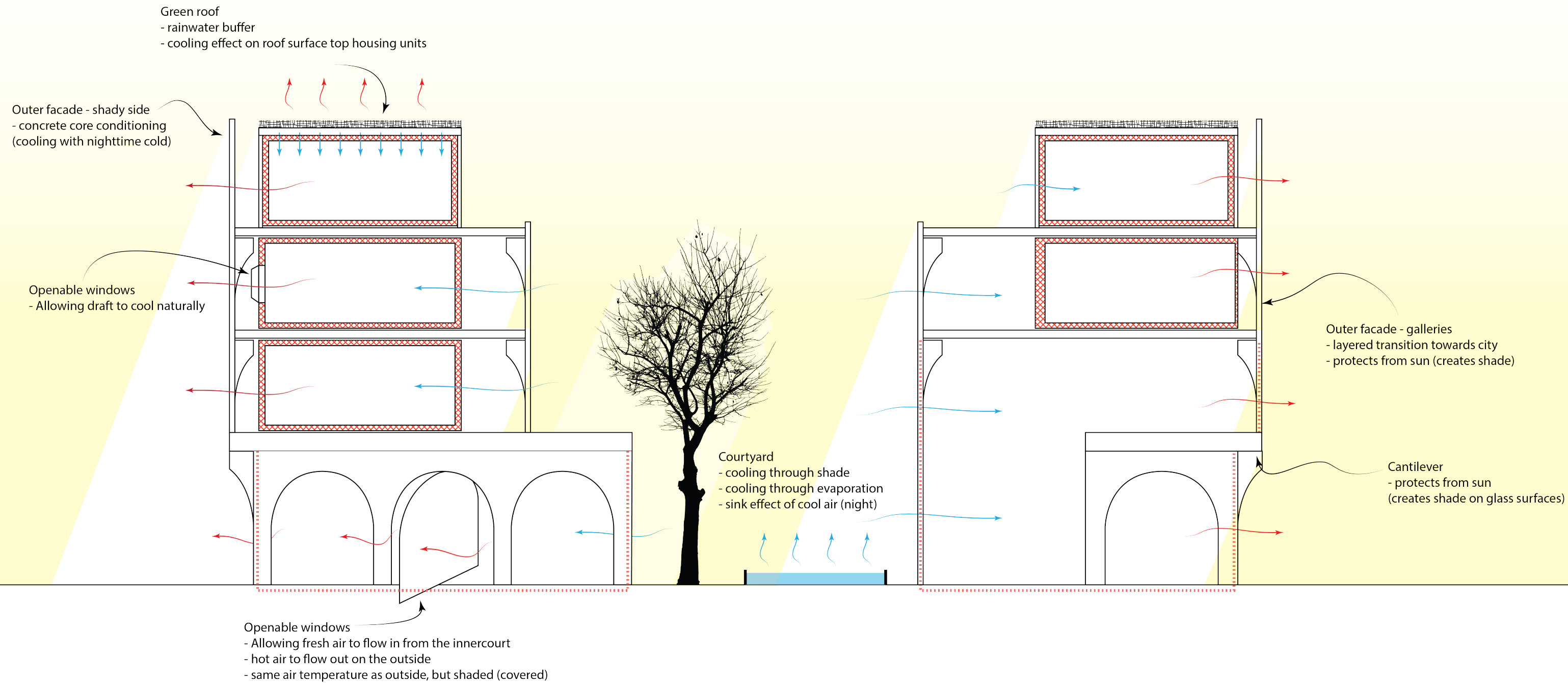
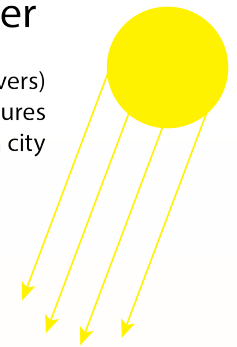
- Structure - outside thermal shell
- Structure - inside thermal shell
- Housing unit - climatized
- Public facilities - inside but not/limited climatized
- Outside - unclimatized



Climate principle
thermal shell

Summer

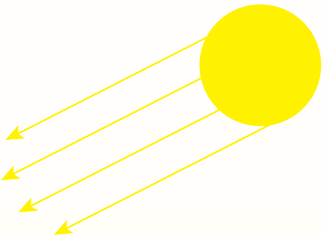
high sun (70°, shades under cantilevers)
high temperatures
heating island effect in city



Climate principle
Summer

Winter

low sun (26°, sun can enter under cantilevers)
cold temperatures
rain and snow



Outer facade as protectice shell
- layered transition towards city
- protects from rain and wind

Green roof
- rainwater buffer
- insulating effect against cold (and snow)

Outer facade on sunny side
- concrete core conditioning
(keeping the outter shell heated up by the sun)

Inside insulation
- only heated where needed
- allows flexibility in plan

Limited thermal shell
- keeping out wind and rain
- keeping out frost
- getting in sun through glass surfaces (greenhouse effect)
- subclimate between outside and inside

Mild constant ground temperatures

Local radiation heat
(in limited areas)

Climate principle
Winter

