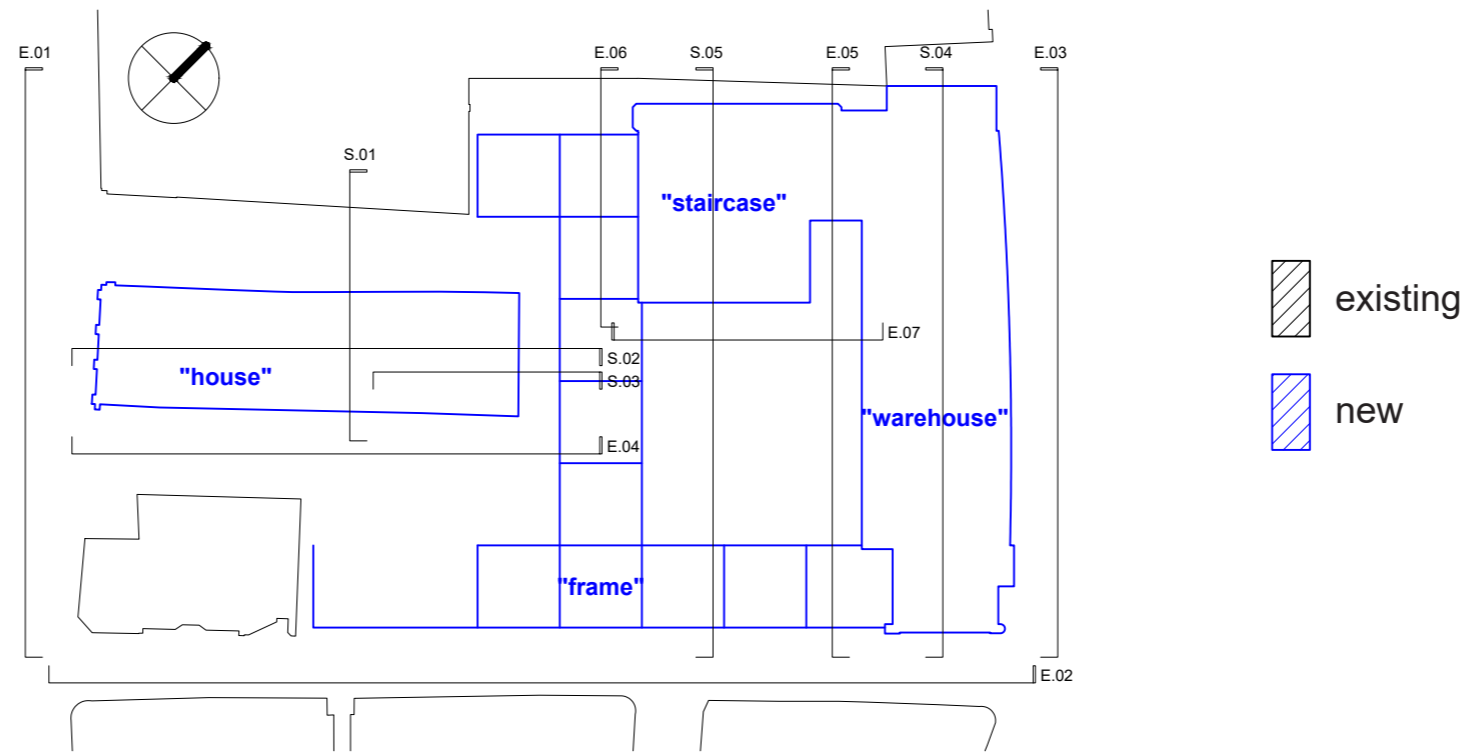


between the **museum as city**
and **city as museum**

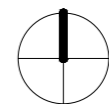
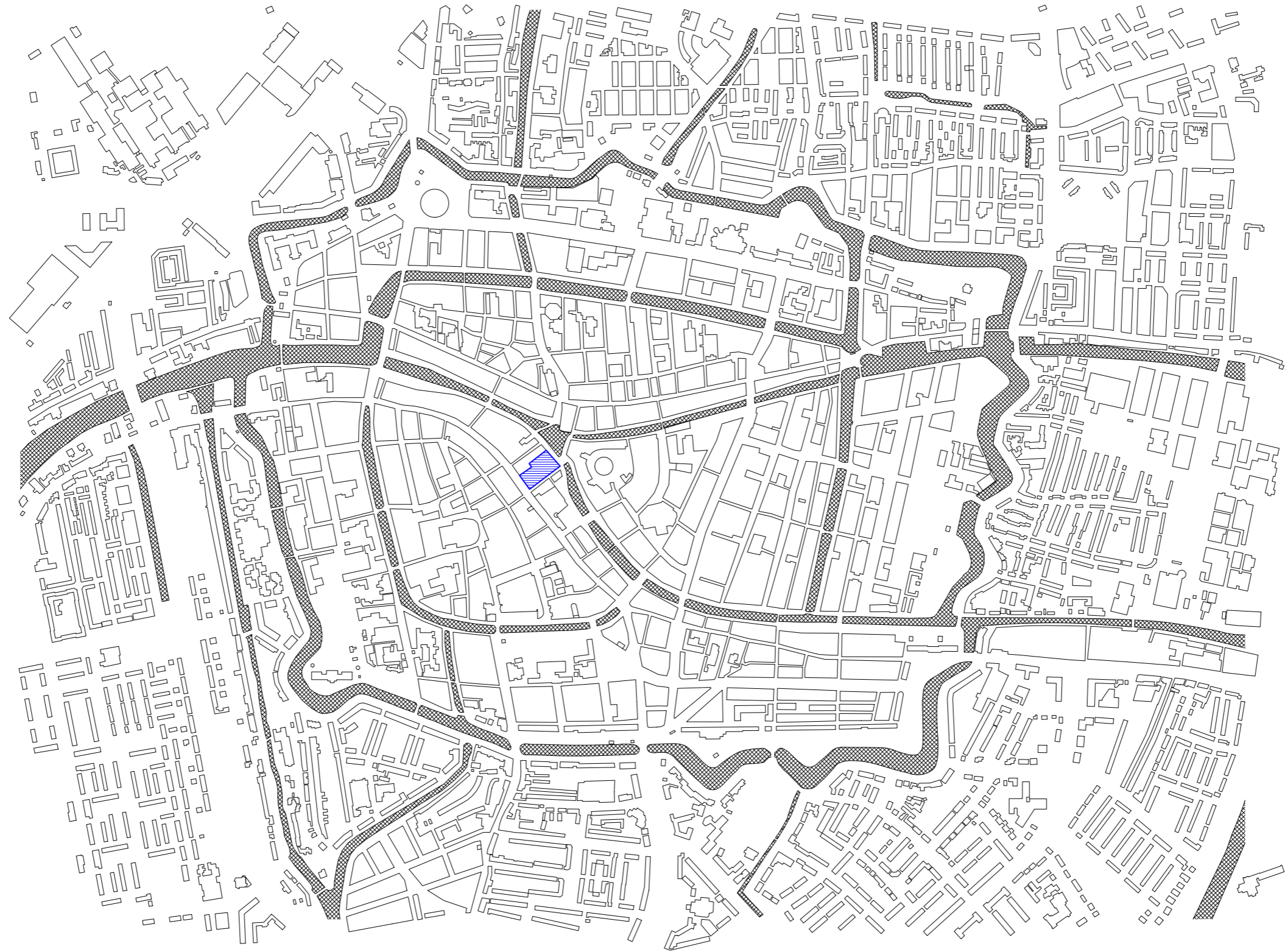
drawing set

Stephan Bastiaans
Explore Lab 29
05 11 2020

reading guide

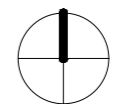
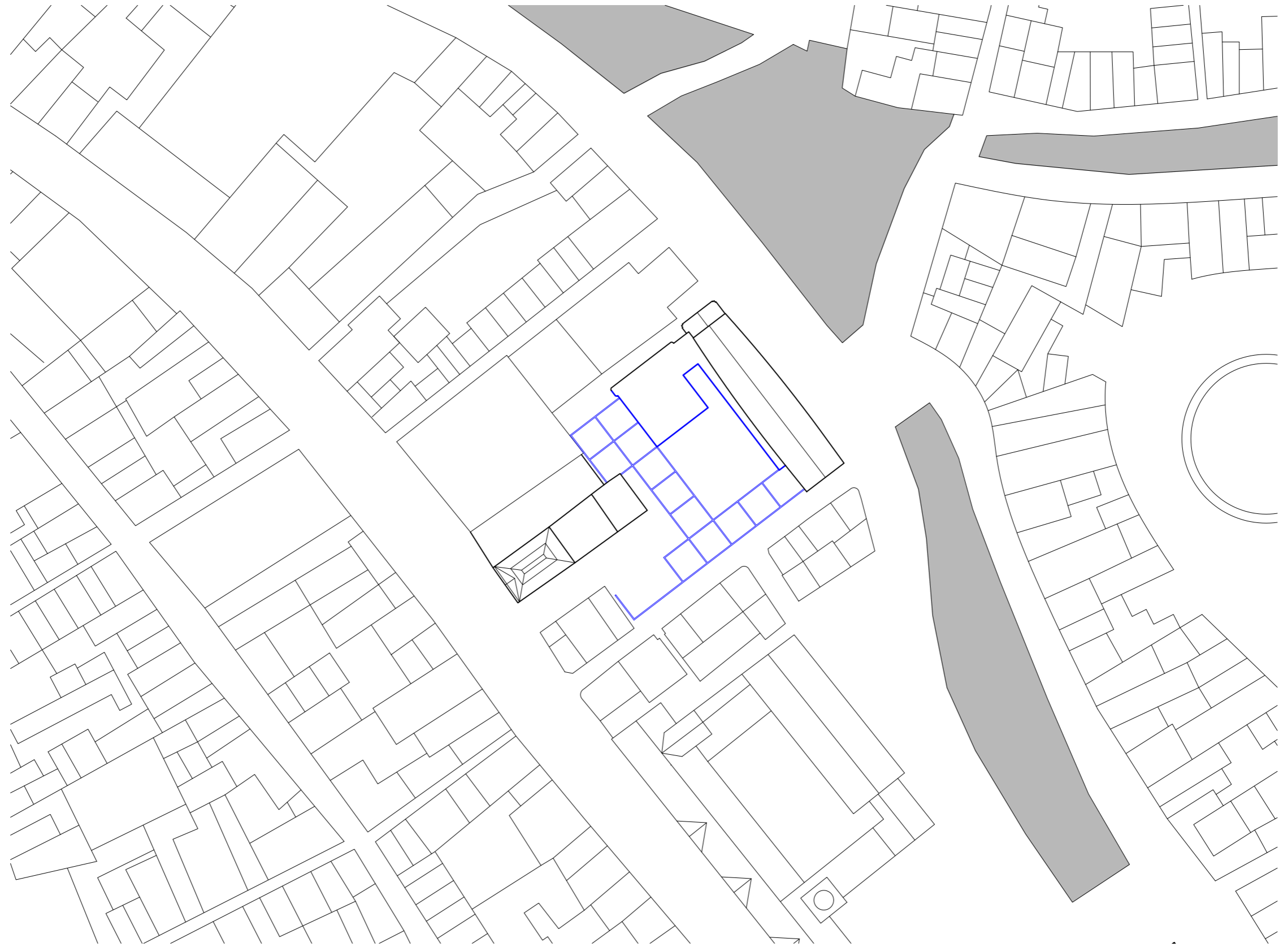


location
1:10000



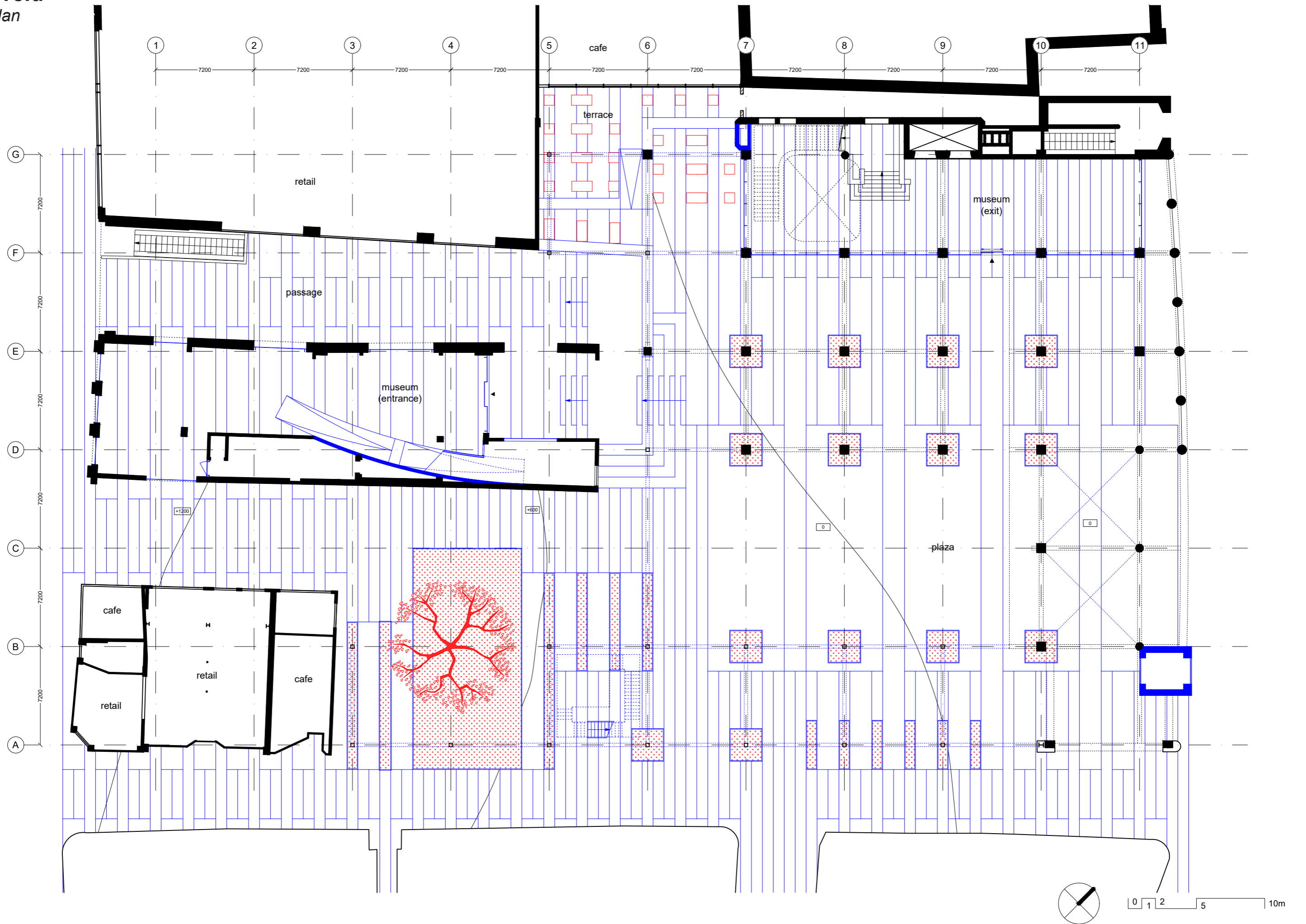
0 100 200 500m

situation
1:1000

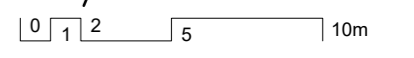
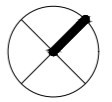
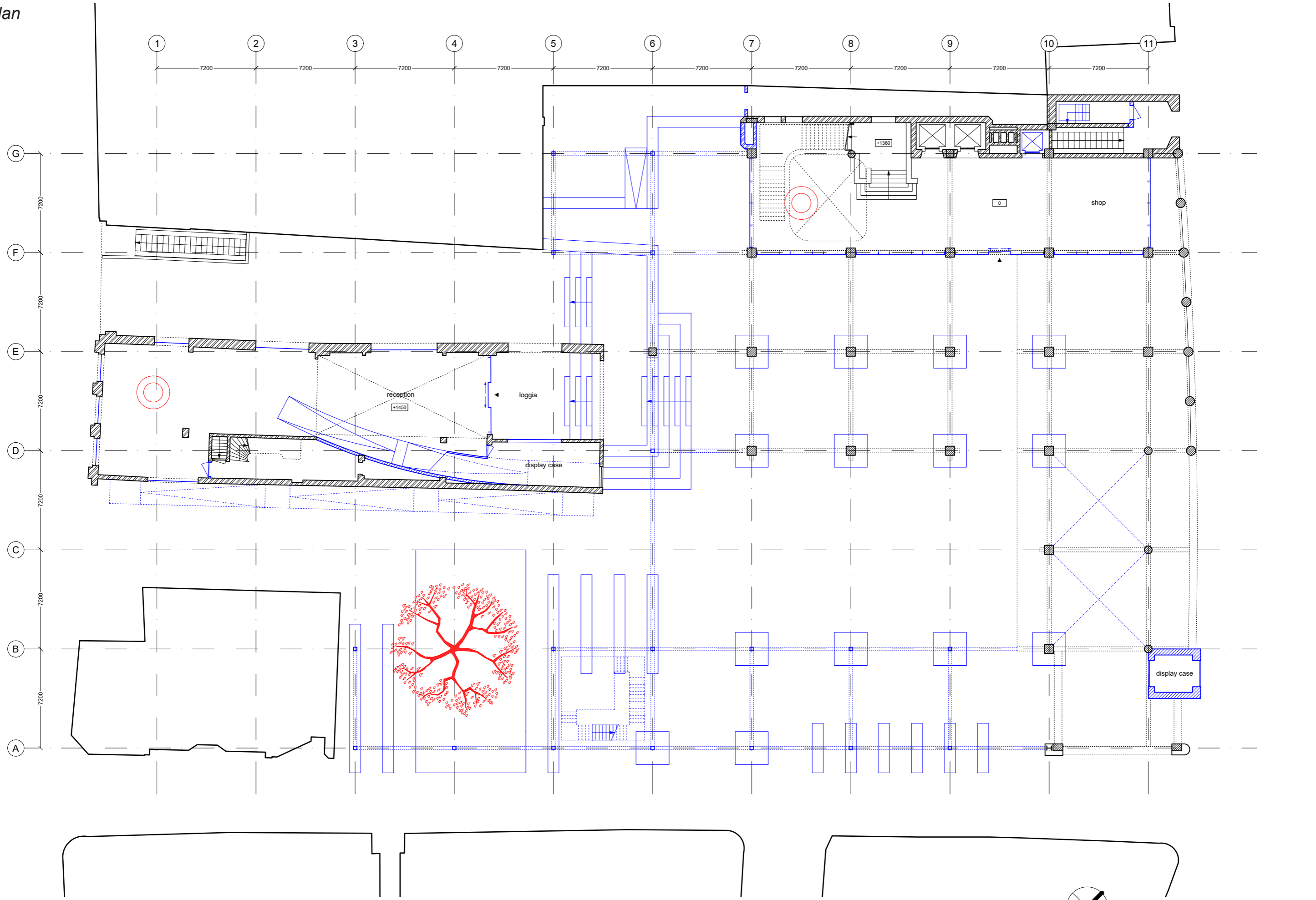


0 10 20 50m

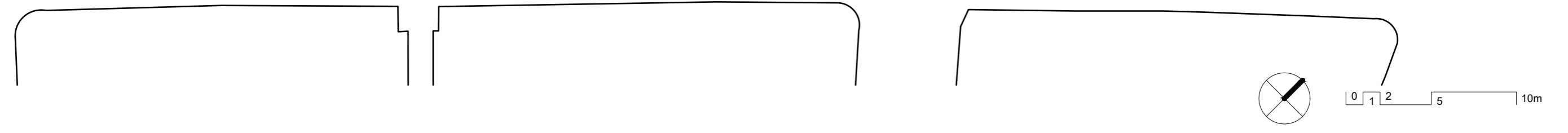
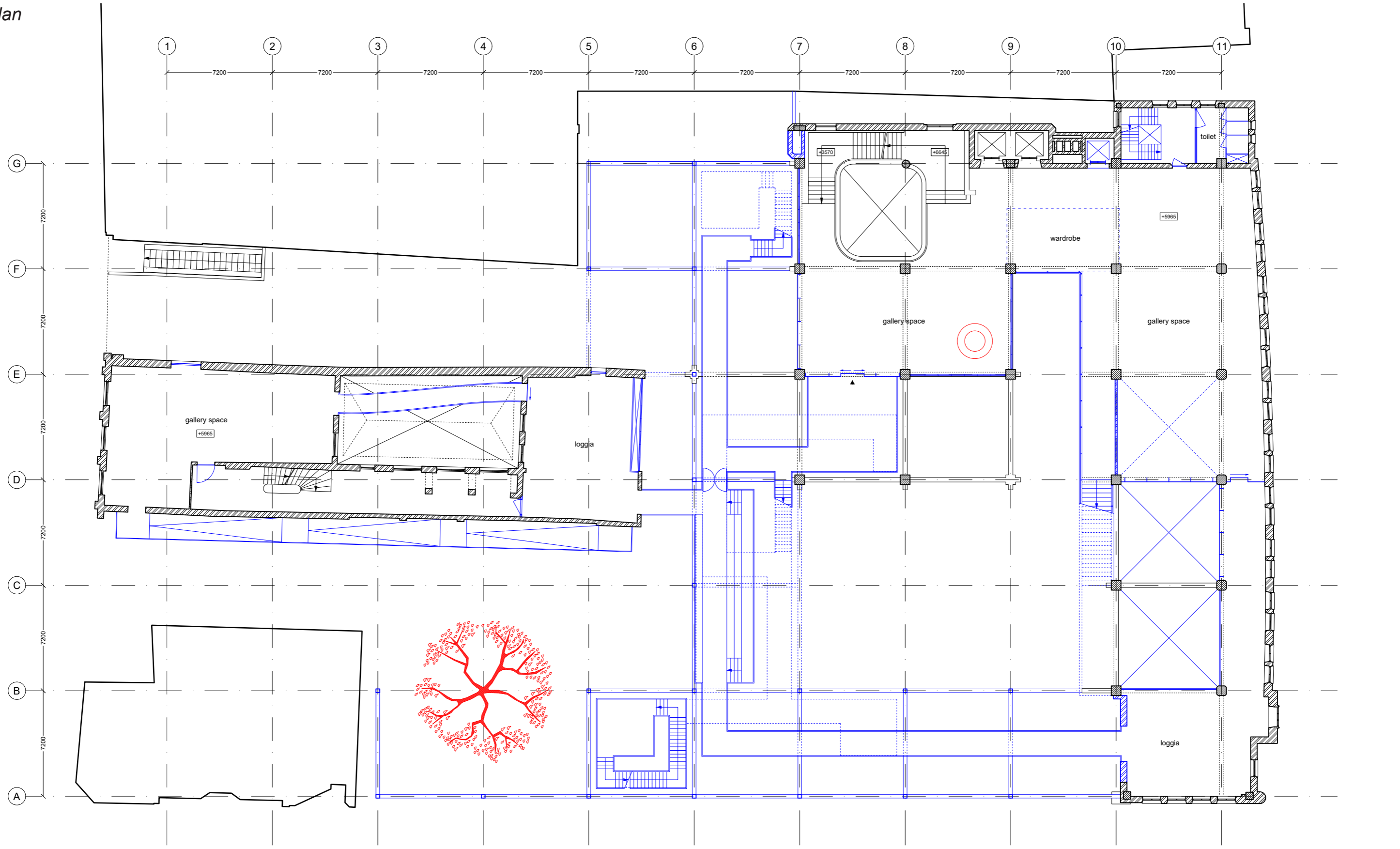
maaiveld
floor plan
1:250



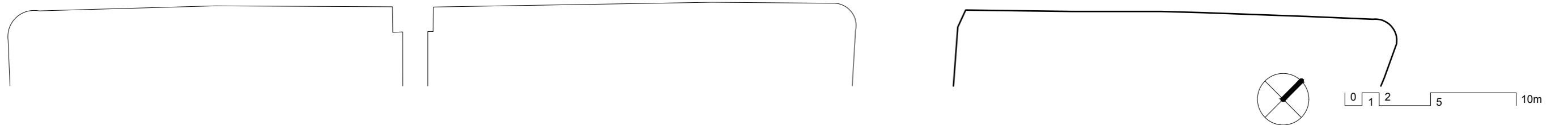
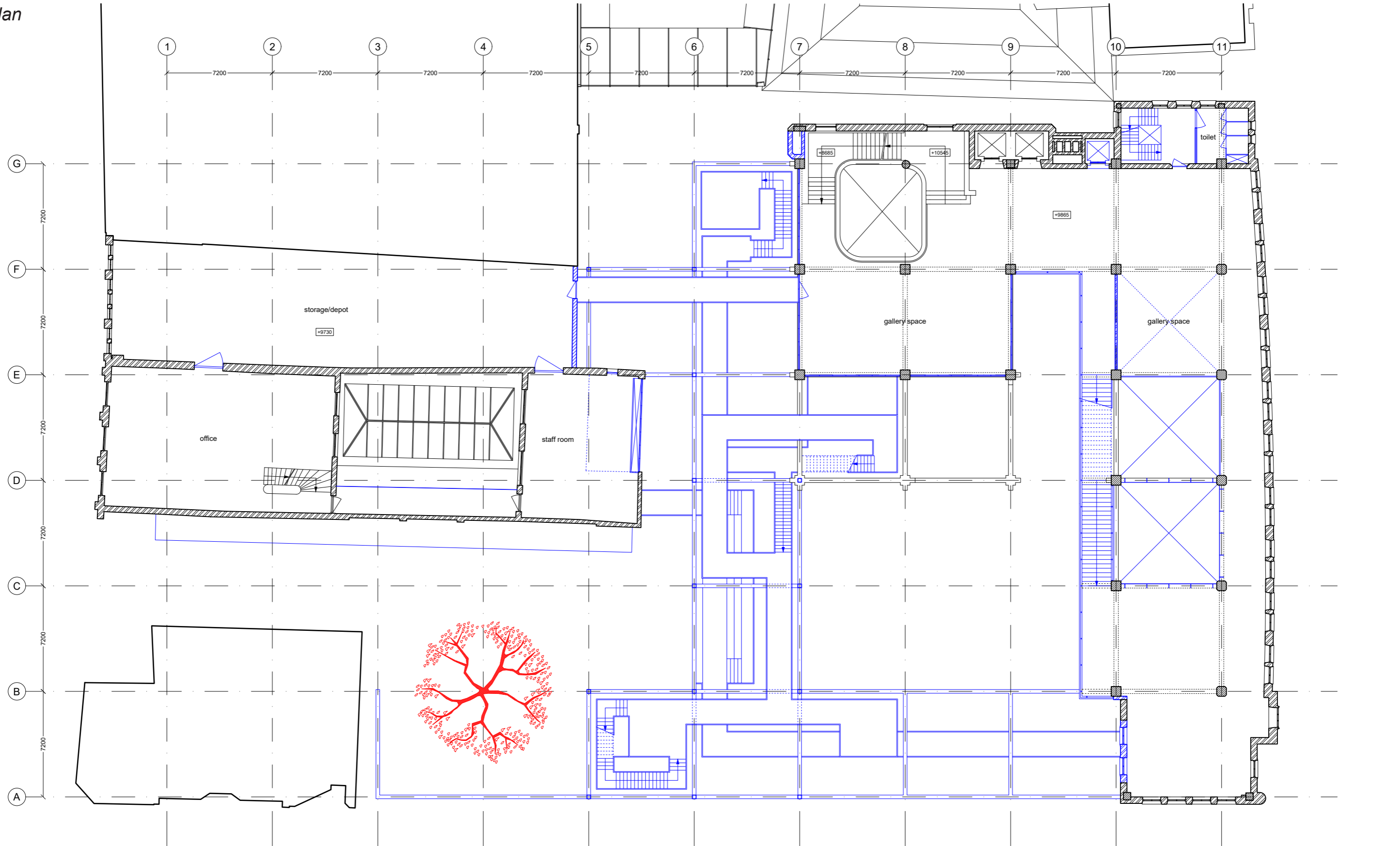
00
floor plan
1:250



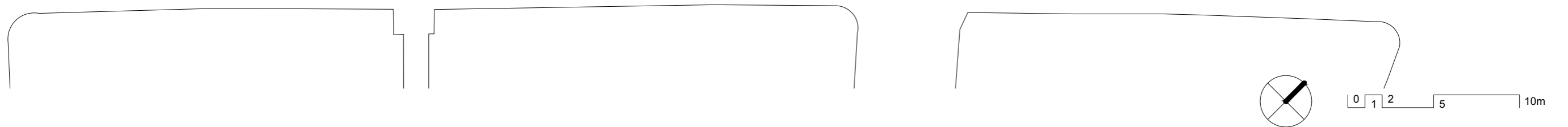
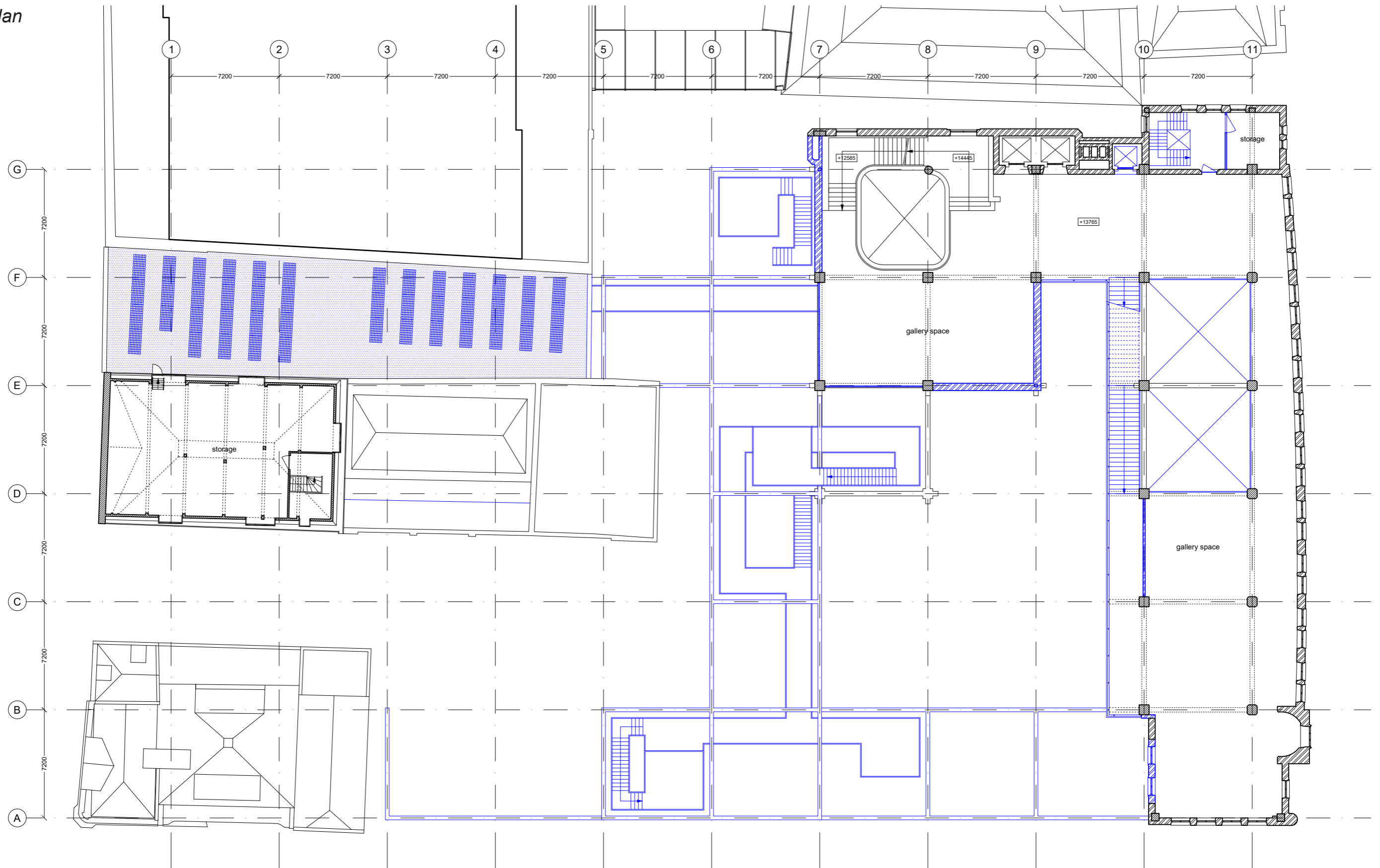
01
floor plan
1:250



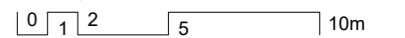
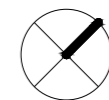
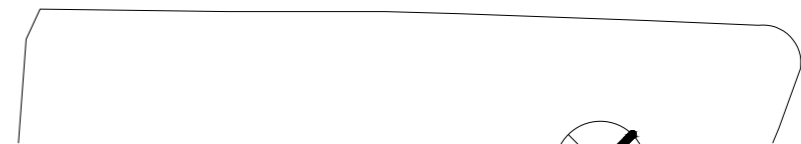
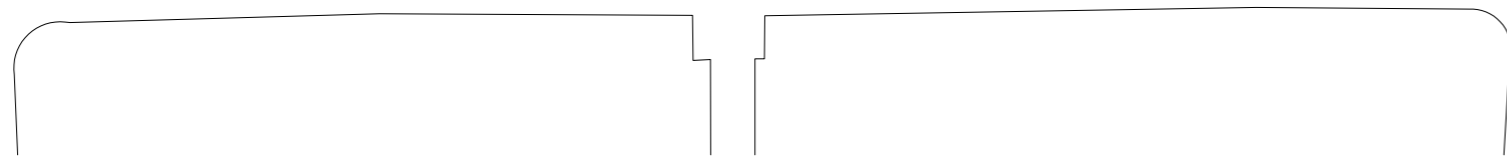
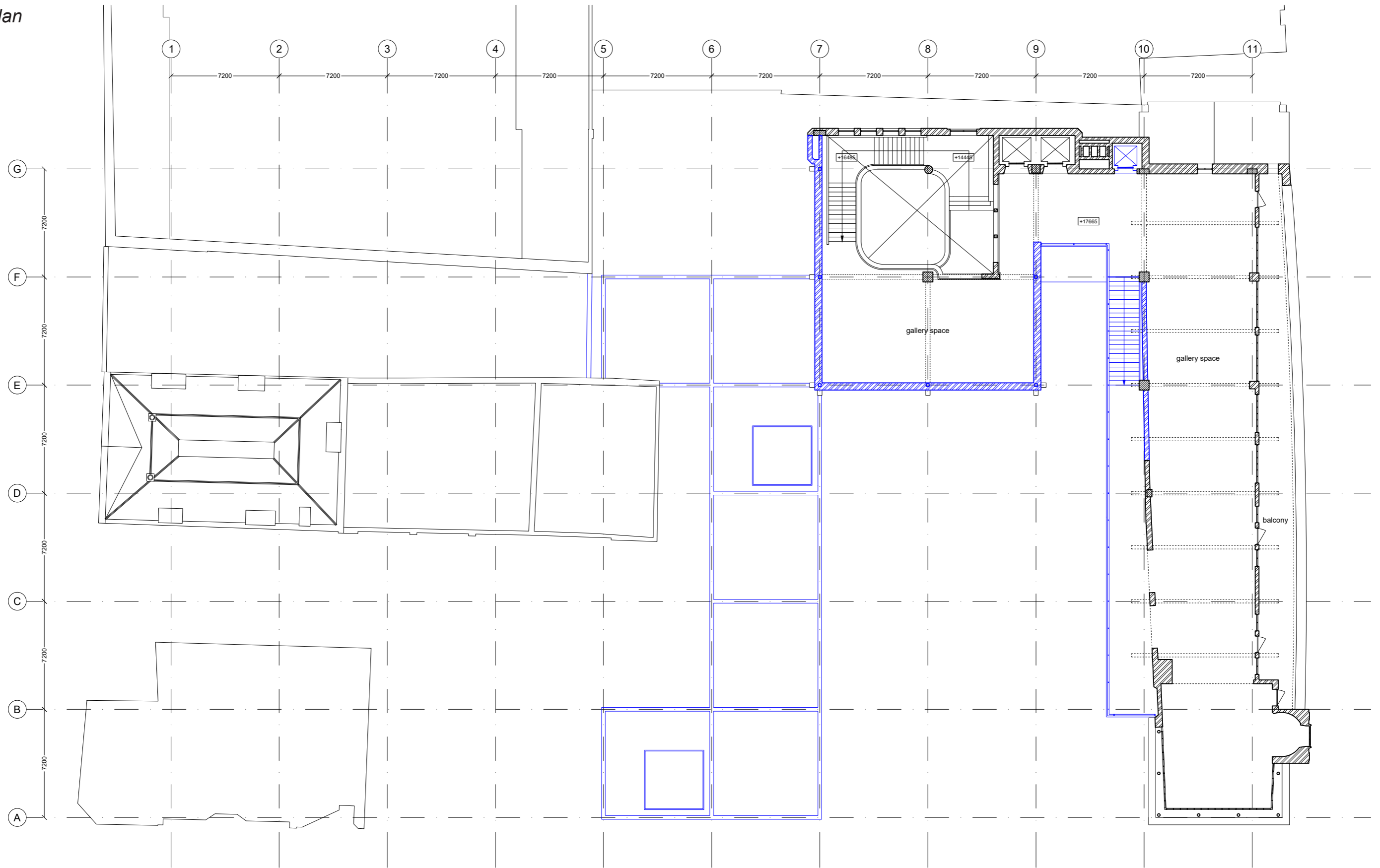
02
floor plan
1:250



03
floor plan
1:250



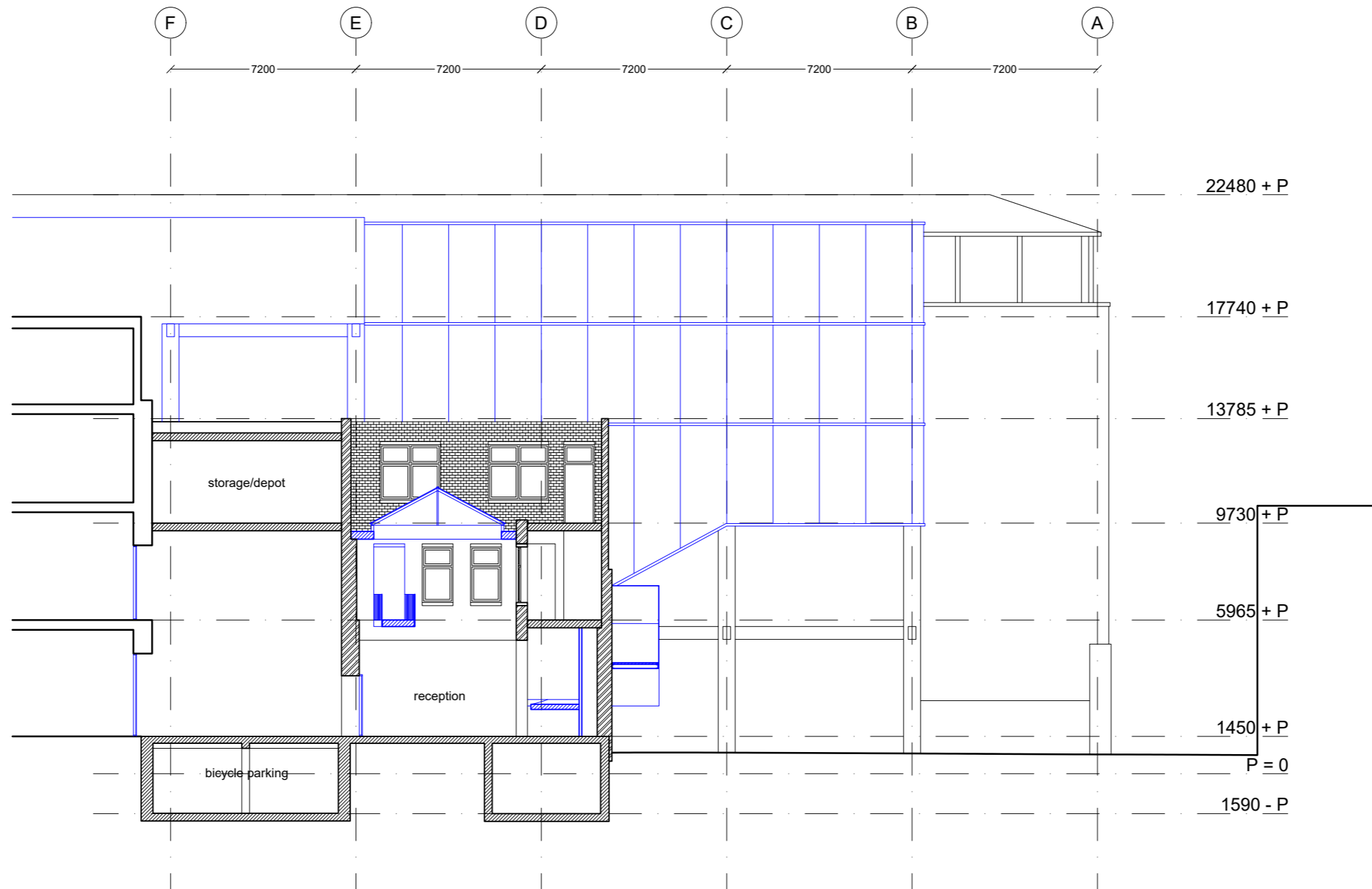
04
floor plan
1:250



passage - house

cross section S.01

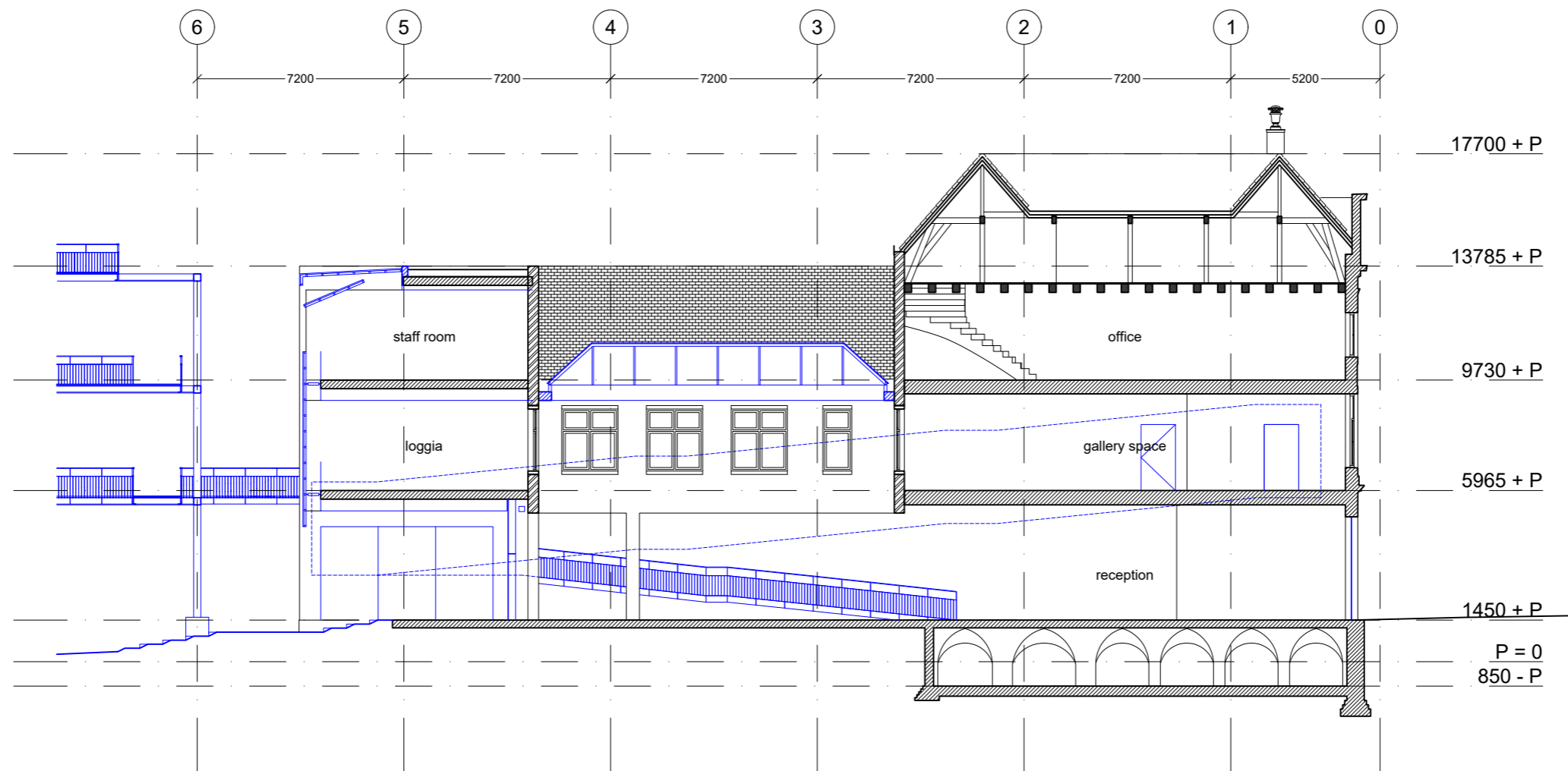
1:200



house

longitudinal section S.02

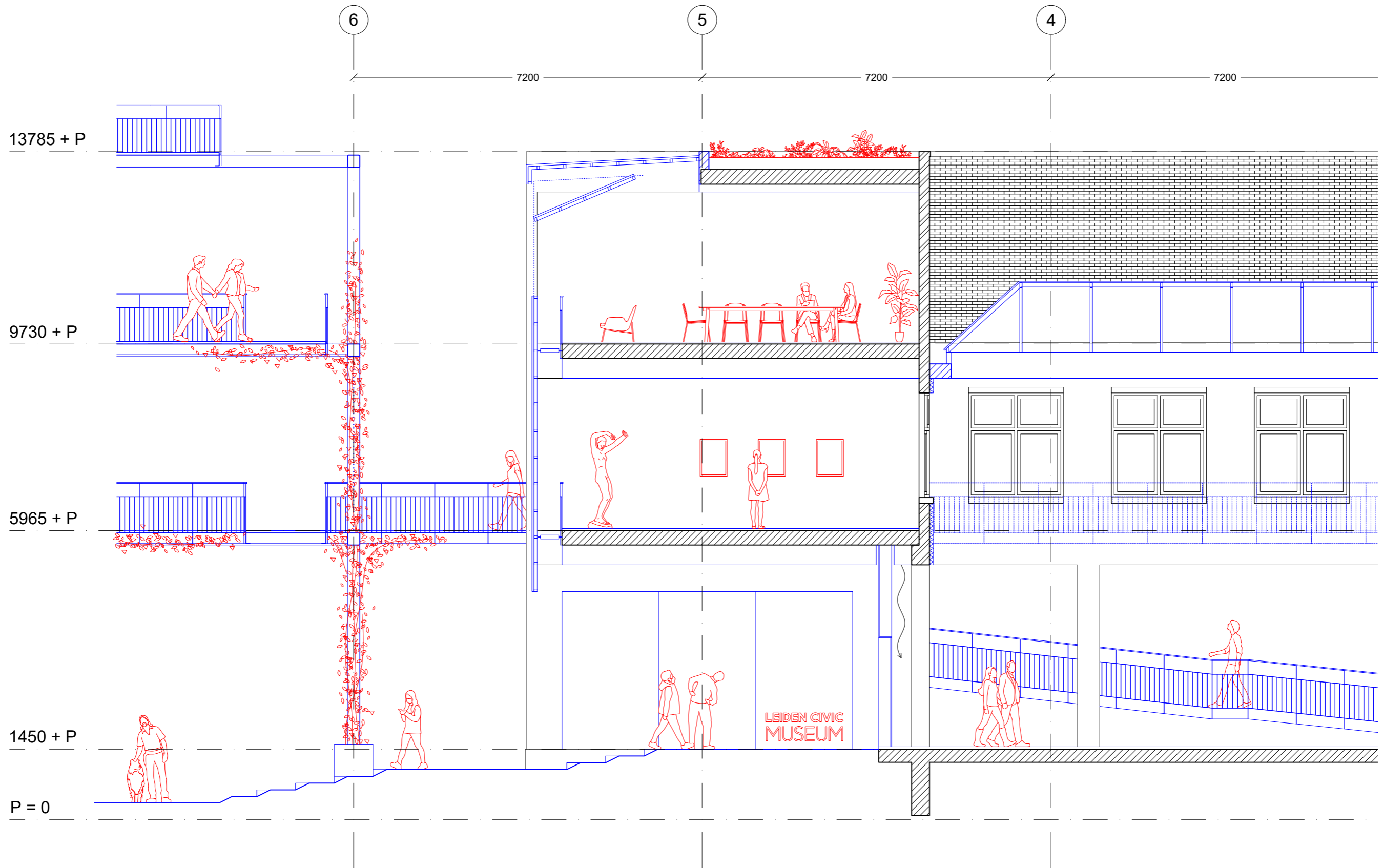
1:200



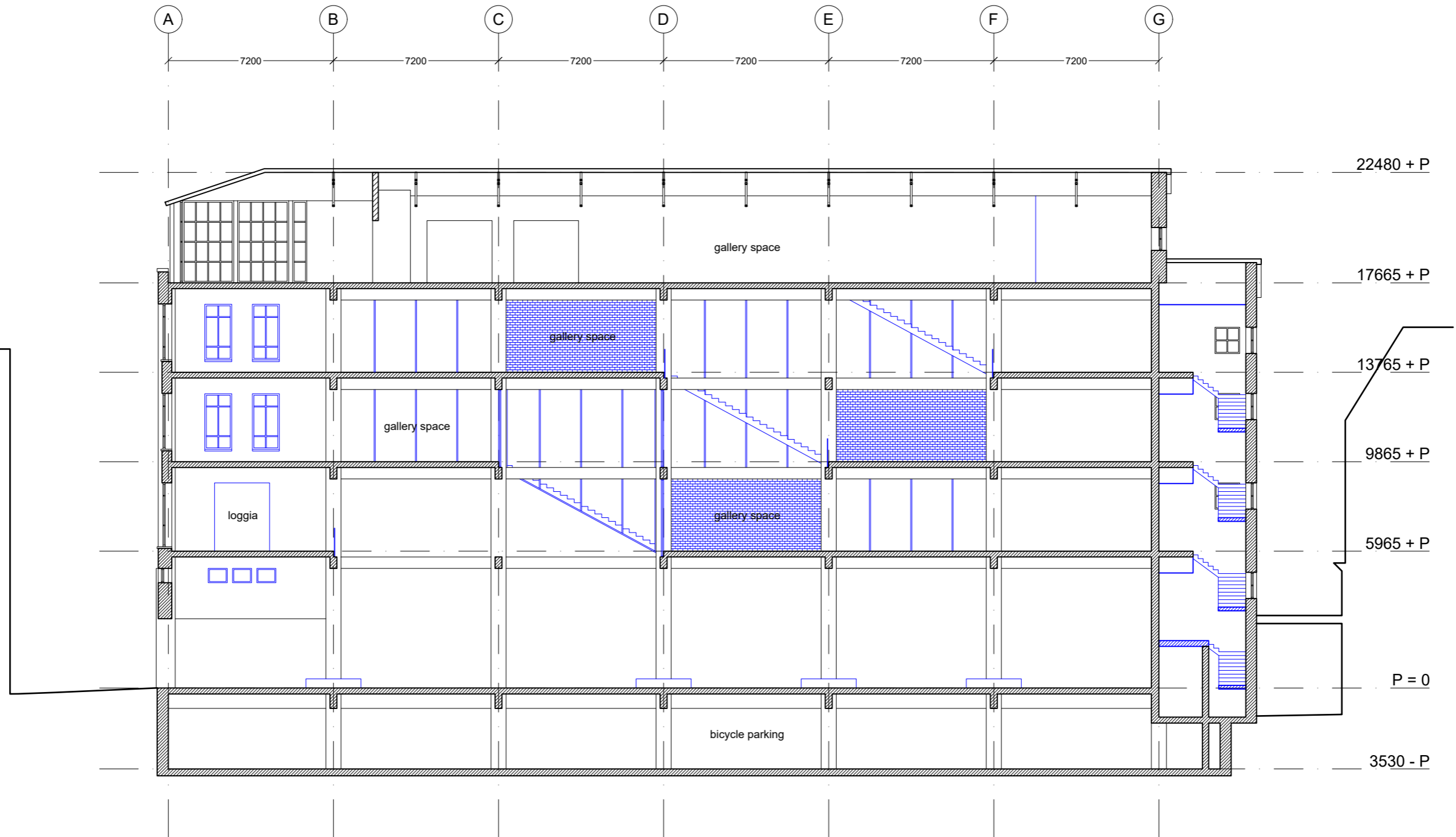
house

longitudinal section S.03

1:80



warehouse
longitudinal section S.04
1:200



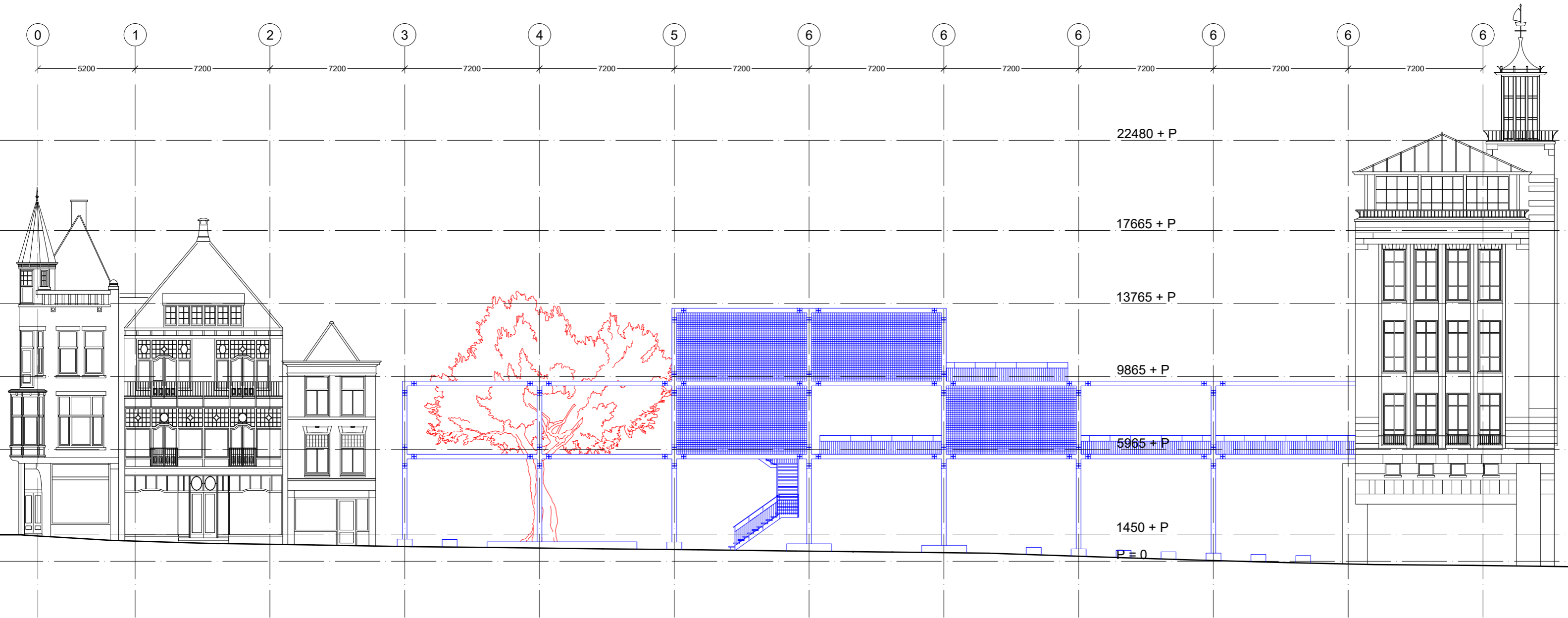
Breestraat

south west elevation E.01

1:200



Maarsmansteeg
south east elevation E.02
1:200



Aalmarkt
north east elevation E.03
1:200



house

south east elevation E.04

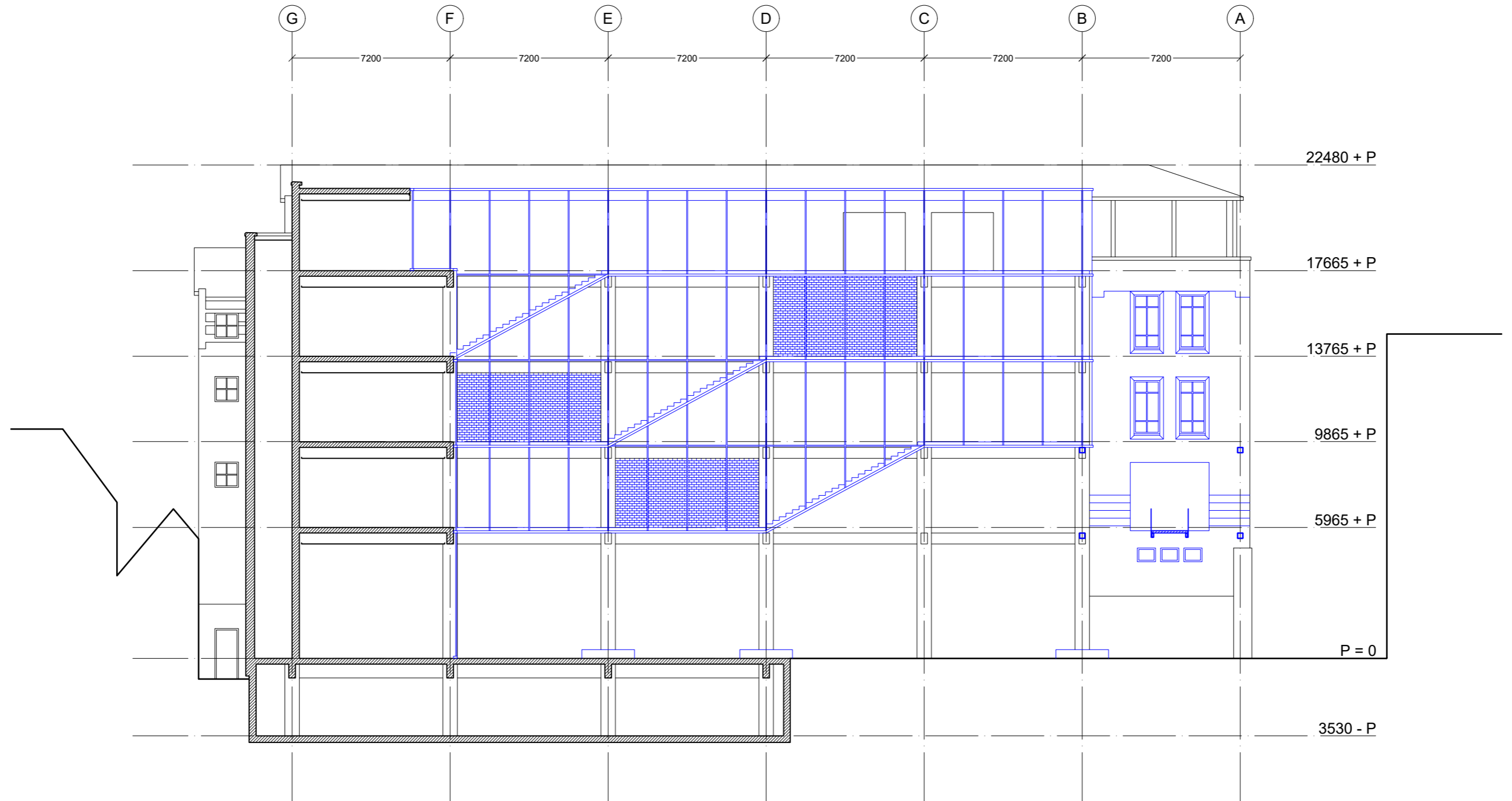
1:200



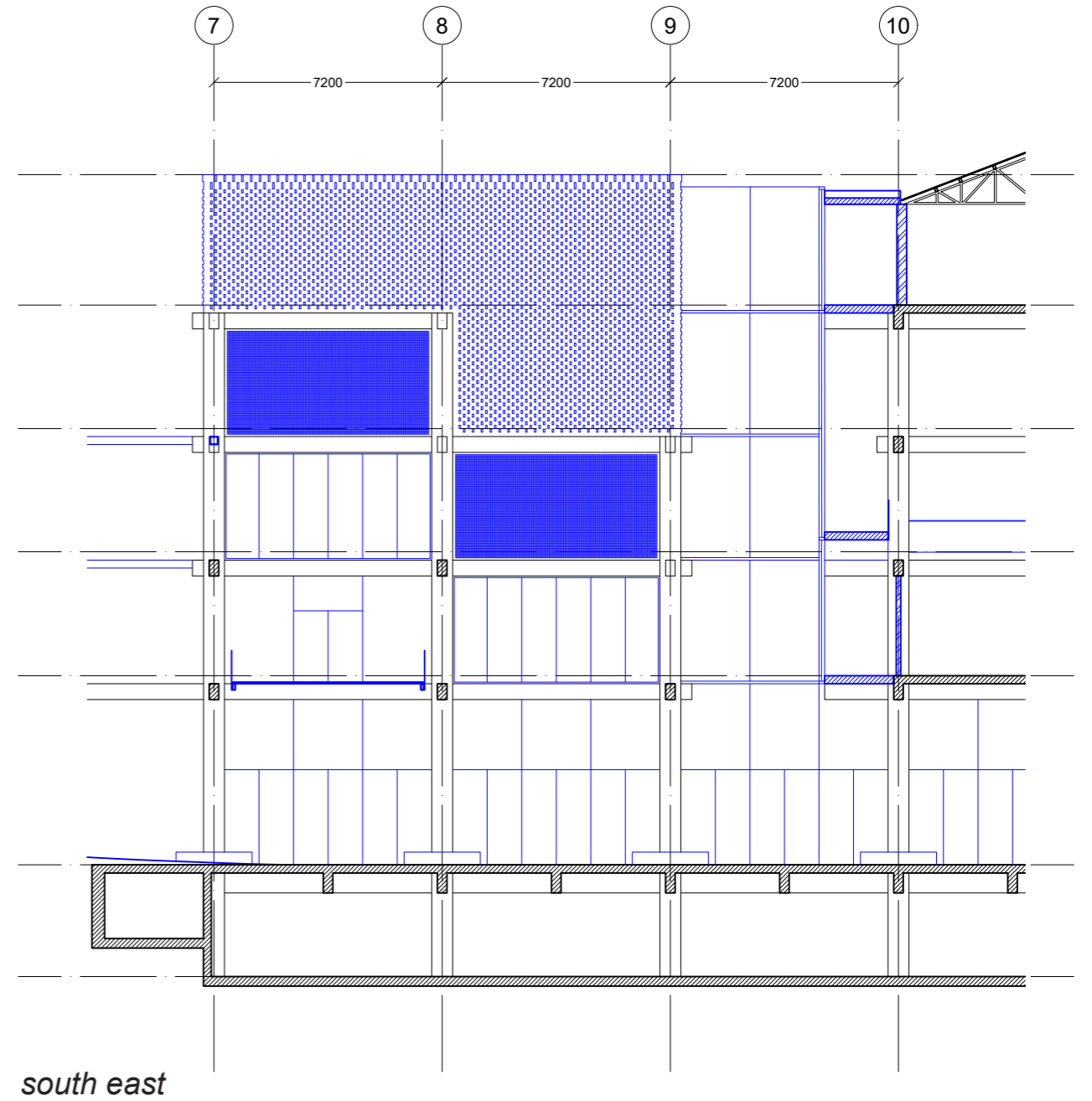
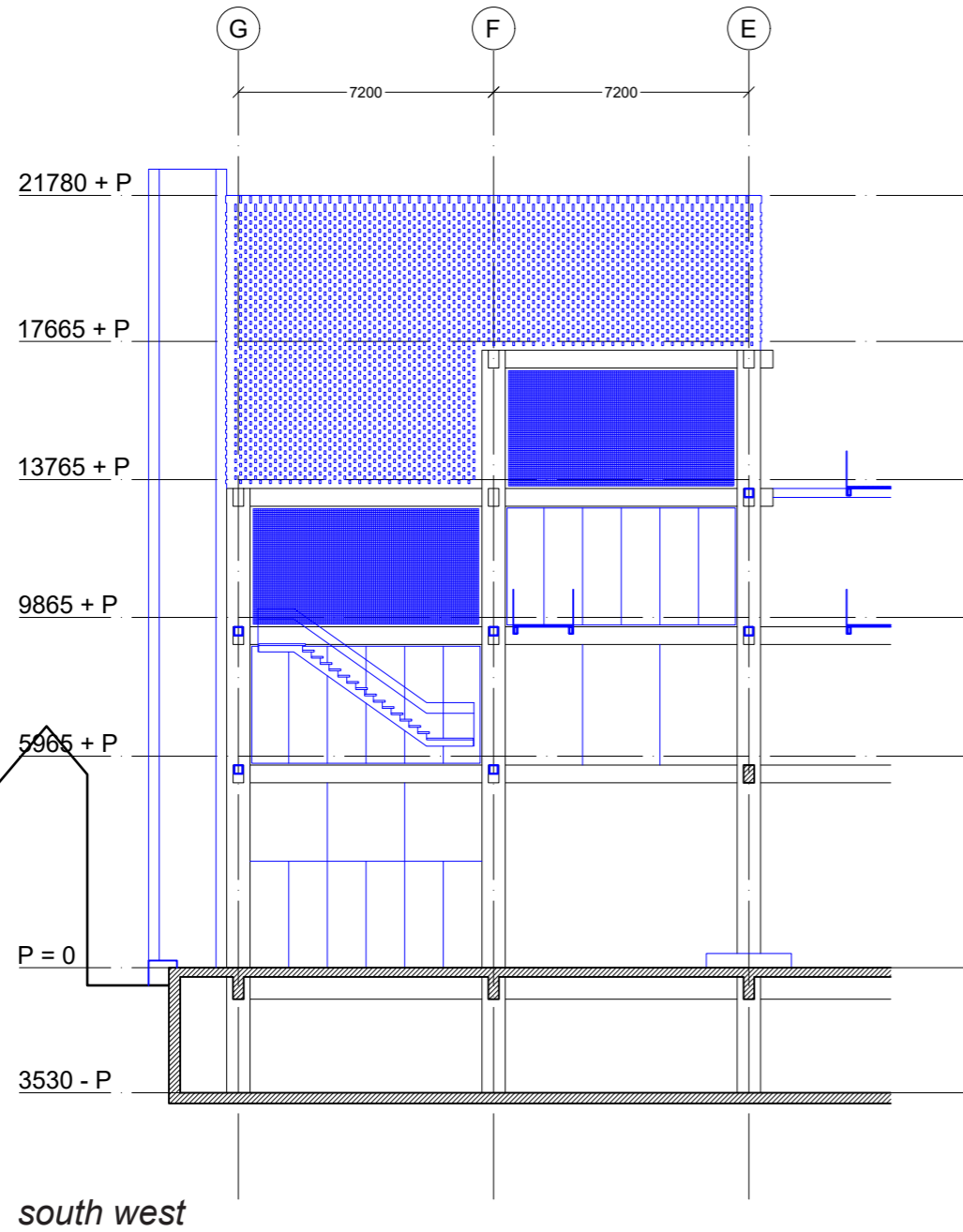
warehouse

south west elevation E.05

1:200



staircase
elevation E.06, E.07
1:200



staircase
fragment
1:50

E

7

8

9

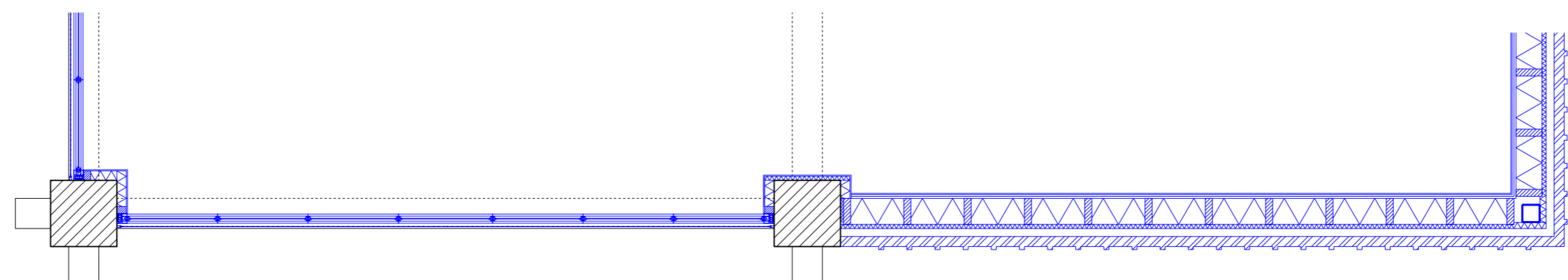
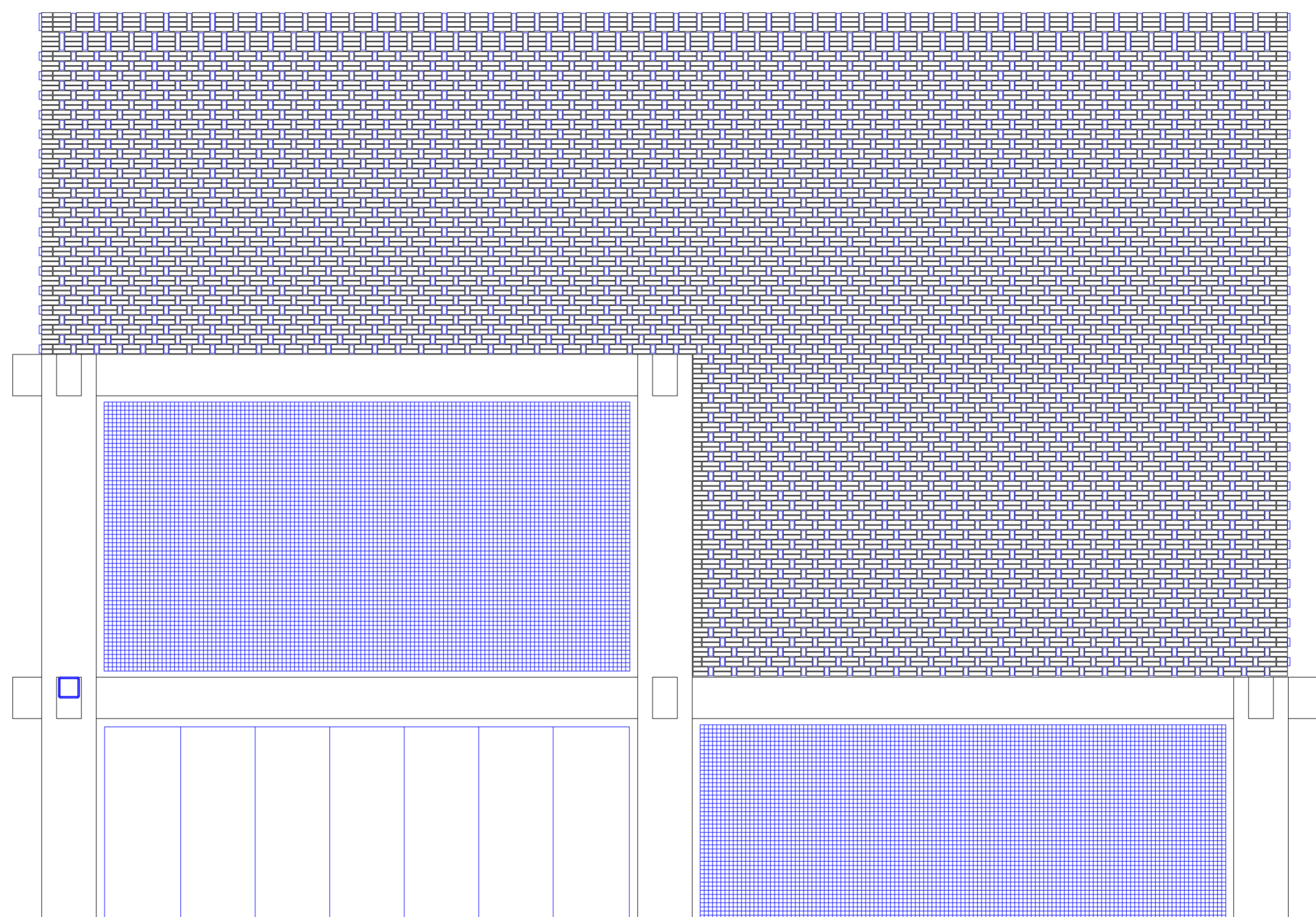
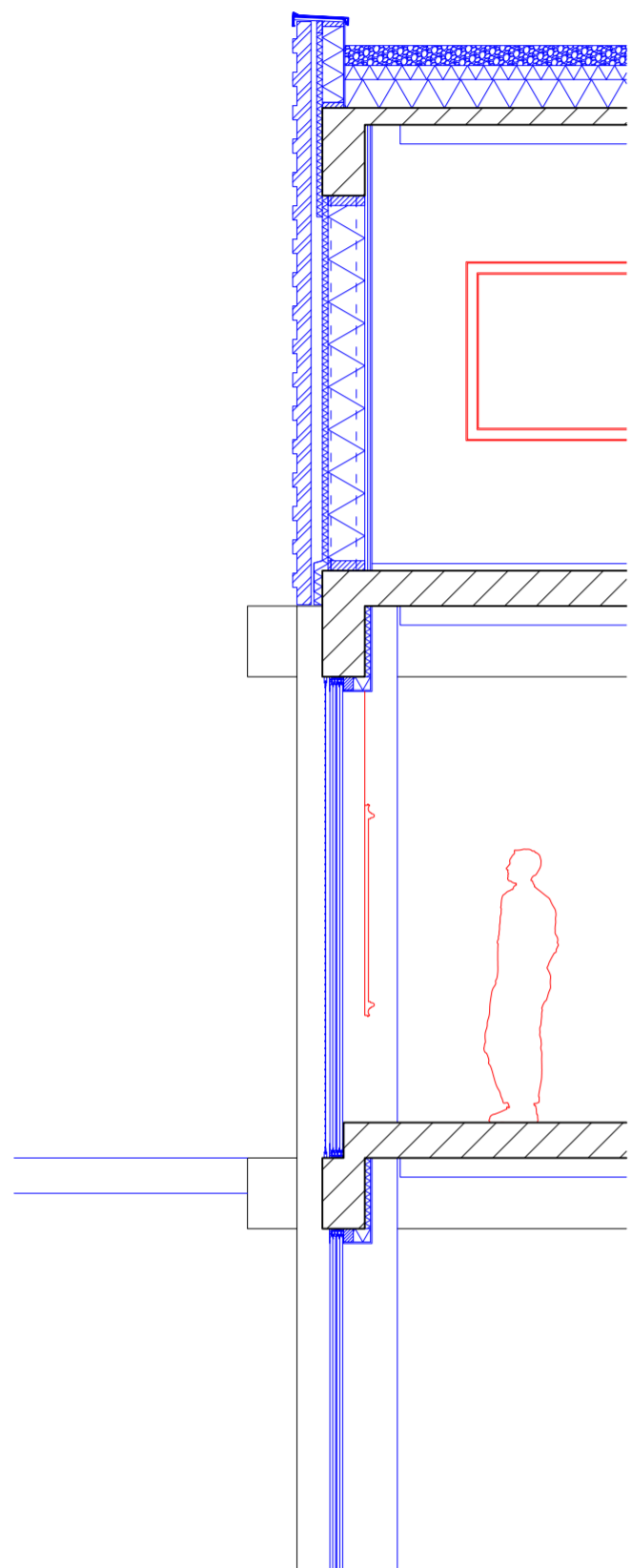
7200

7200

21780 + P

17665 + P

13765 + P



E

staircase

roof detail

1:10

E

21780 + P

21105 + P

360
30 100 40 40 150

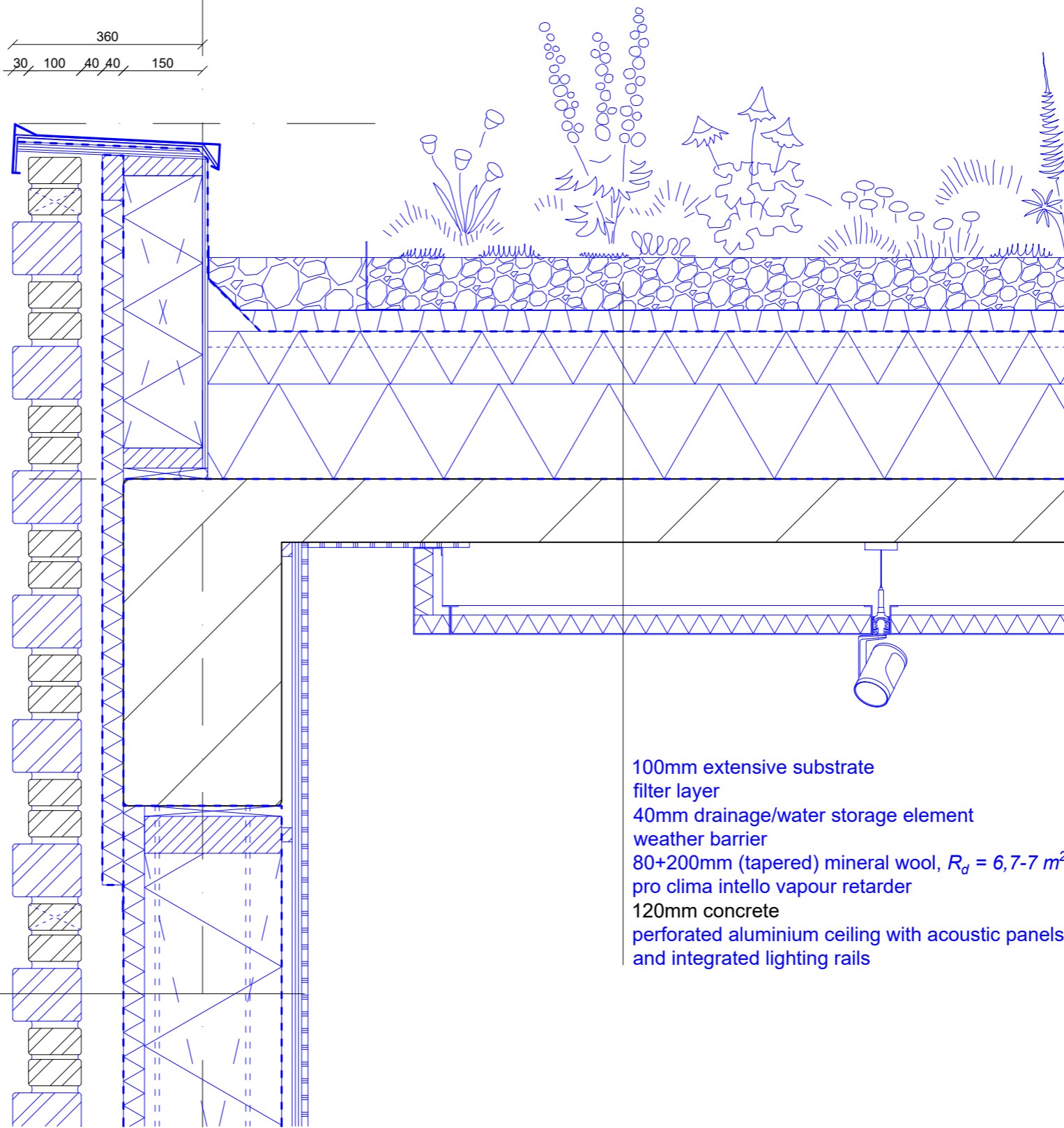
420
100 40 100 180
295
120 140 35

(partly) reused brick with 30mm protrusion
weather barrier
60+260mm hemp insulation, $R_d = 8,42 \text{ m}^2\text{K/W}$
pro clima intello vapour retarder
18mm plywood
12mm gypsum fibre board

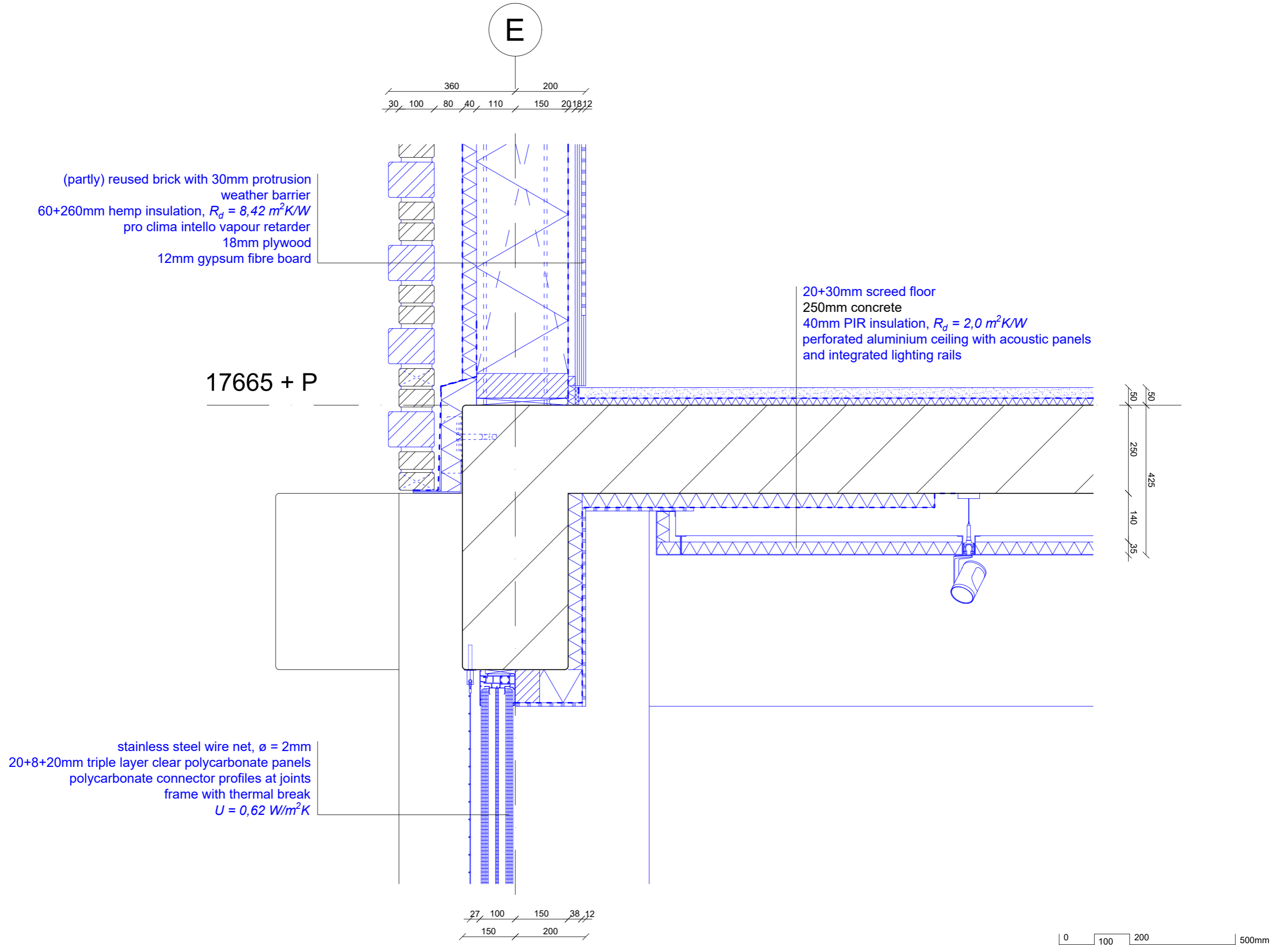
100mm extensive substrate
filter layer
40mm drainage/water storage element
weather barrier
80+200mm (tapered) mineral wool, $R_d = 6,7-7 \text{ m}^2\text{K/W}$
pro clima intello vapour retarder
120mm concrete
perforated aluminium ceiling with acoustic panels
and integrated lighting rails

30 100 80 40 110 150 20 18 12
360 200

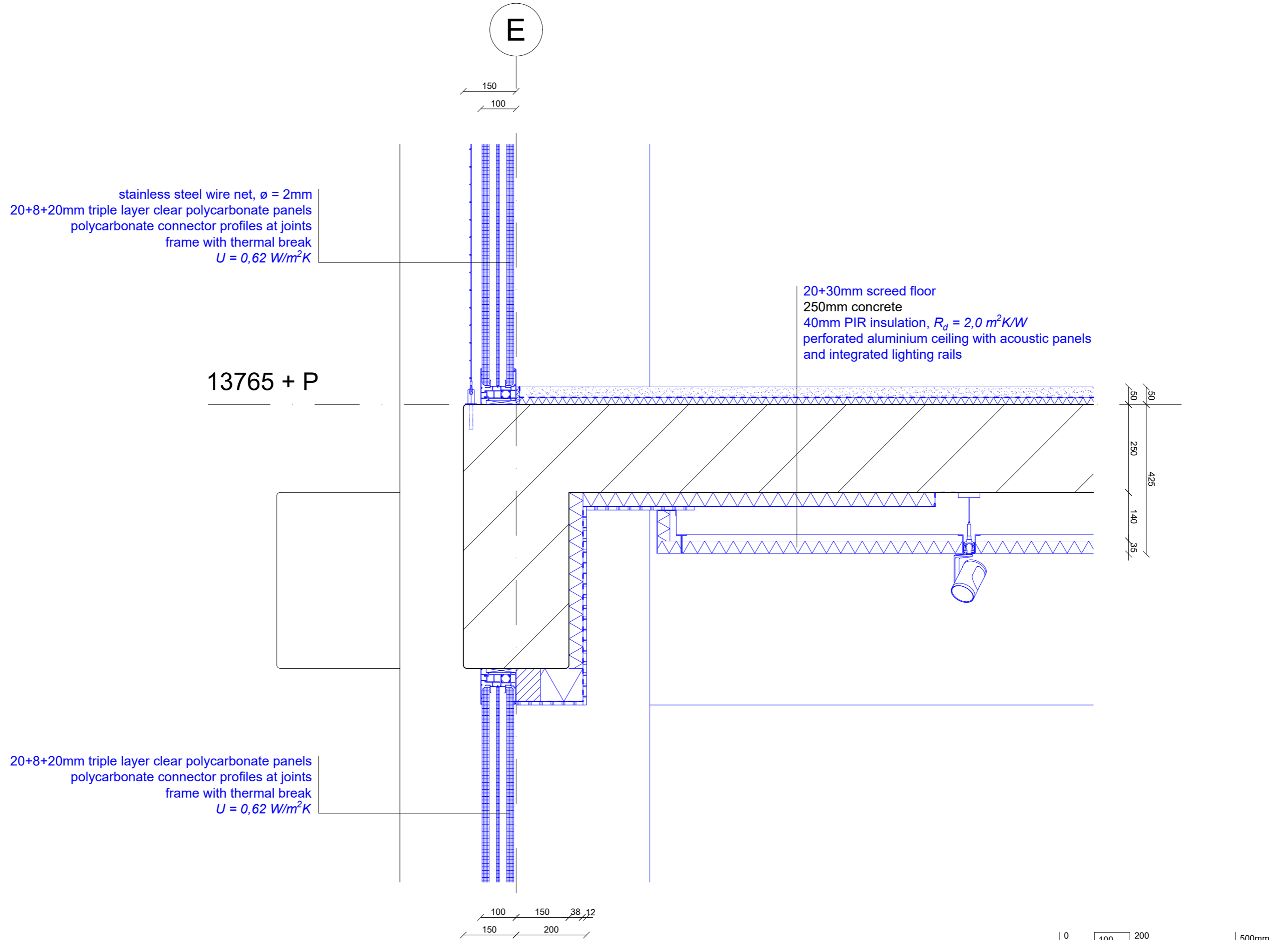
0 100 200 500mm



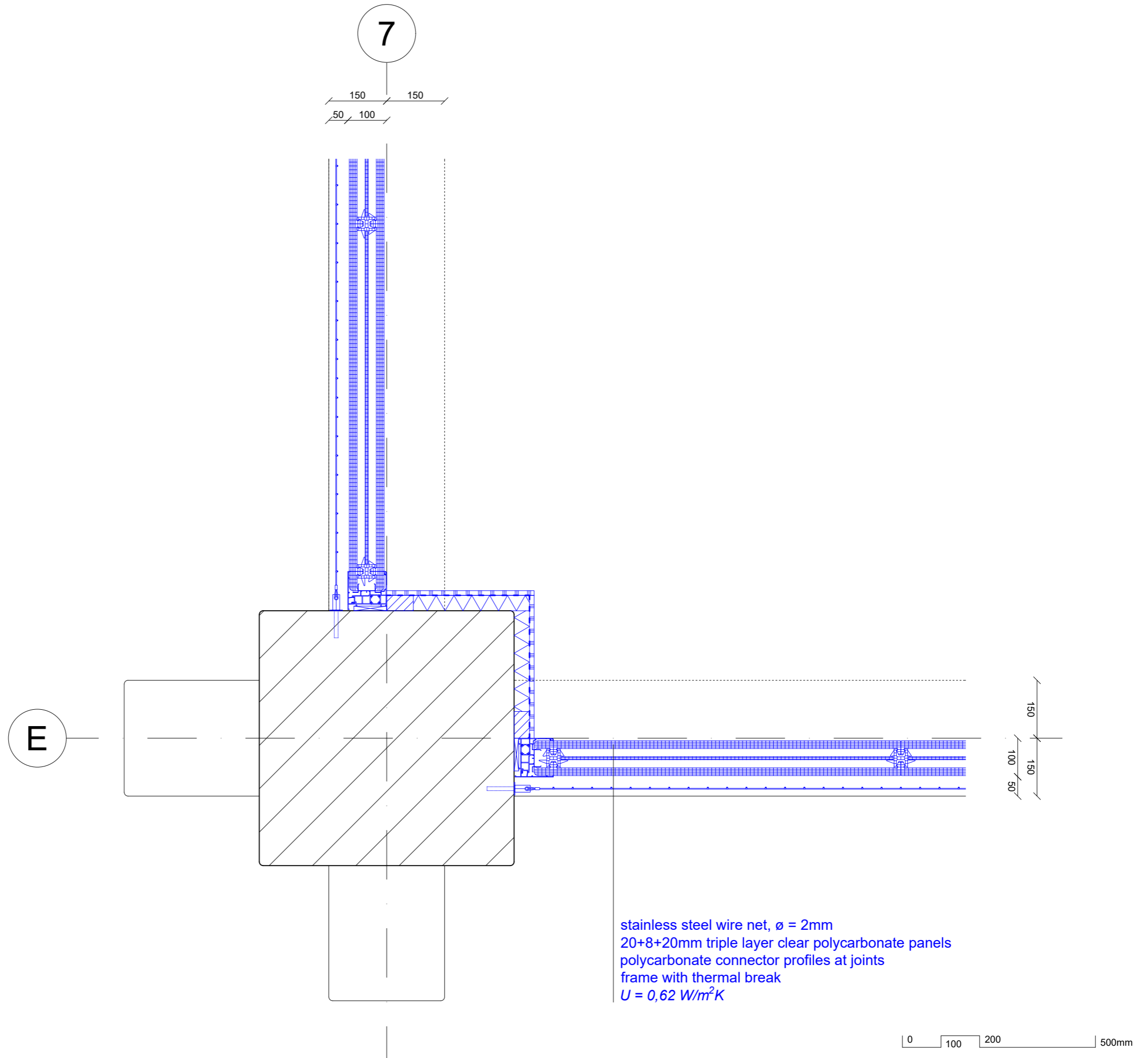
staircase
vertical detail
1:10



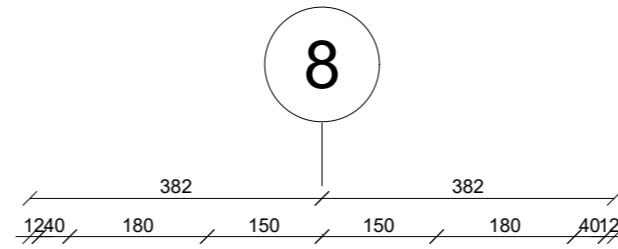
staircase
vertical detail
1:10



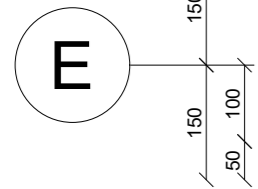
staircase
horizontal detail
1:10



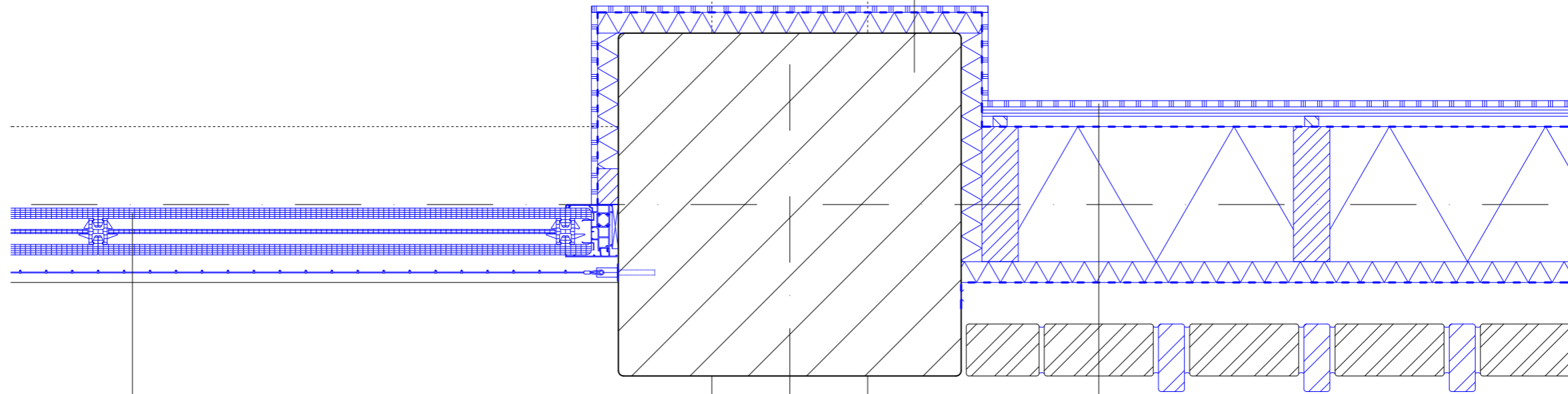
staircase
horizontal detail
1:10



8



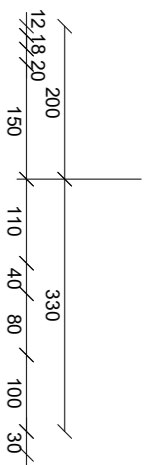
E



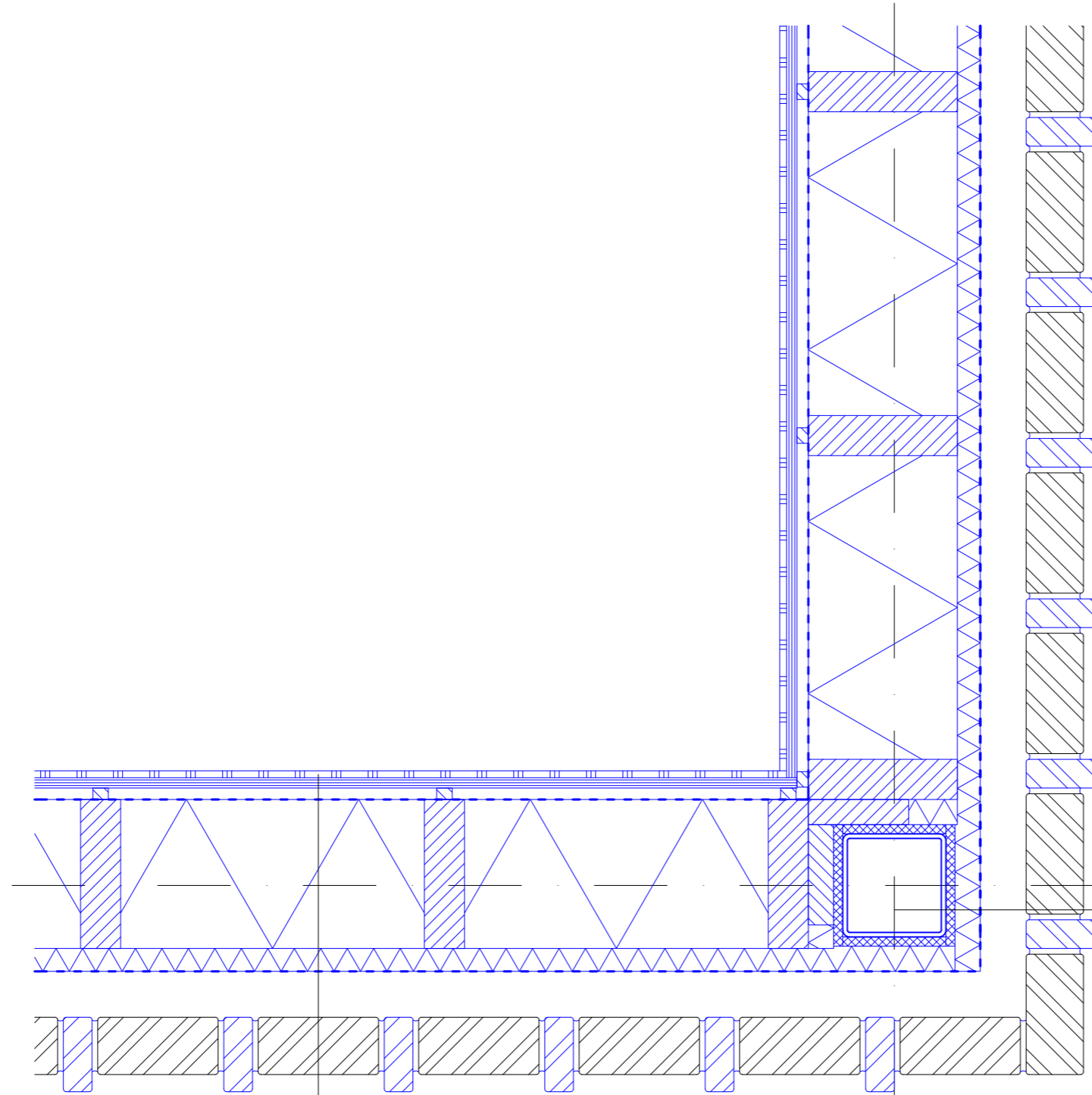
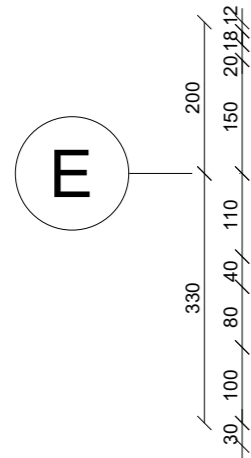
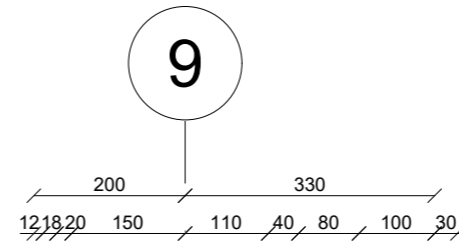
12mm gypsum fibre board
vapour barrier
40mm PIR insulation, $R_d = 2,0 \text{ m}^2\text{K/W}$
660x660mm concrete column

stainless steel wire net, $\phi = 2\text{mm}$
20+8+20mm triple layer clear polycarbonate panels
polycarbonate connector profiles at joints
frame with thermal break
 $U = 0,62 \text{ W/m}^2\text{K}$

reused brick with 30mm protrusion
weather barrier
60+260mm hemp insulation, $R_d = 8,42 \text{ m}^2\text{K/W}$
pro clima intello vapour retarder
18mm plywood
12mm gypsum fibre board



staircase
corner detail
1:10

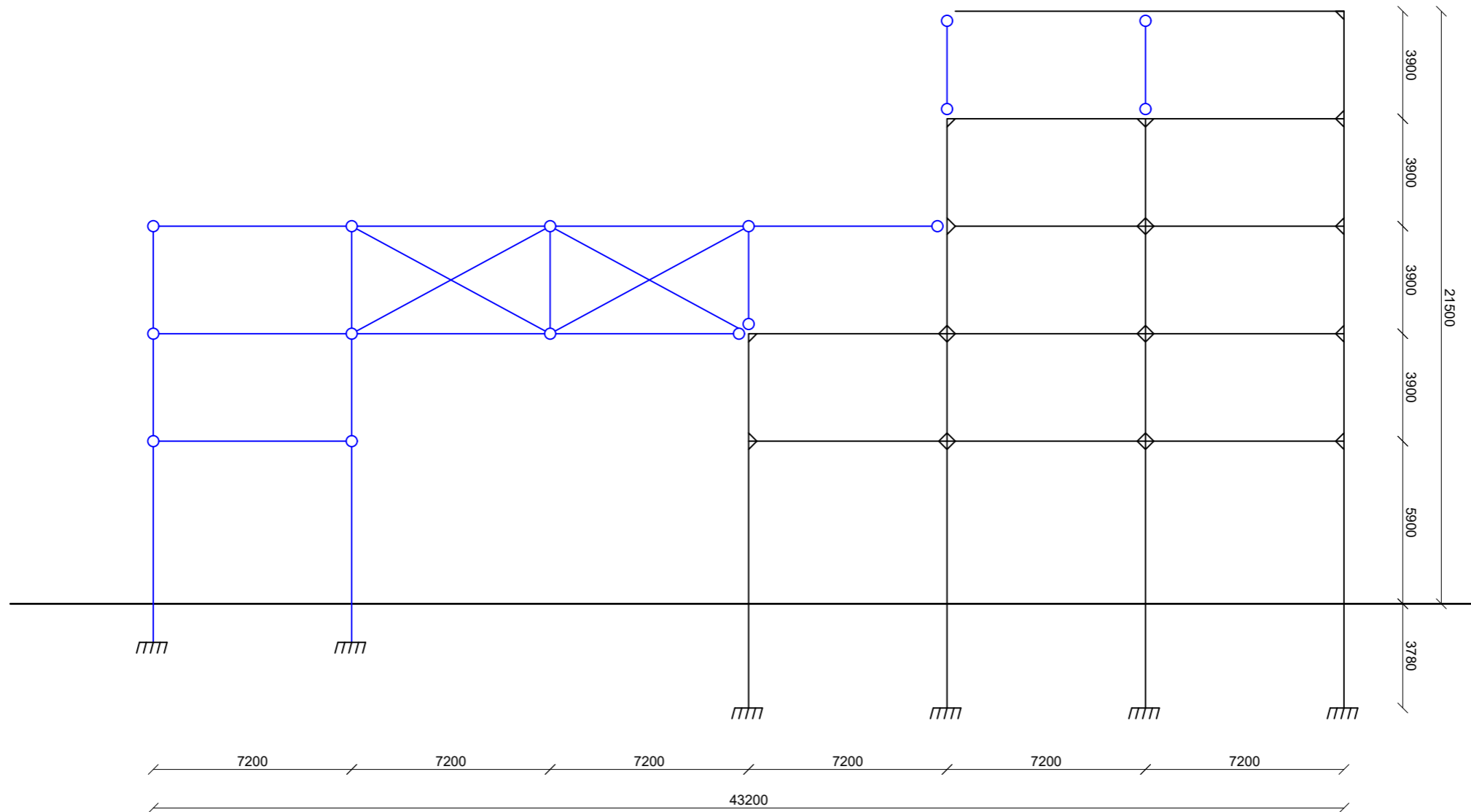


180x180x8mm square steel hollow section
flame retardant board

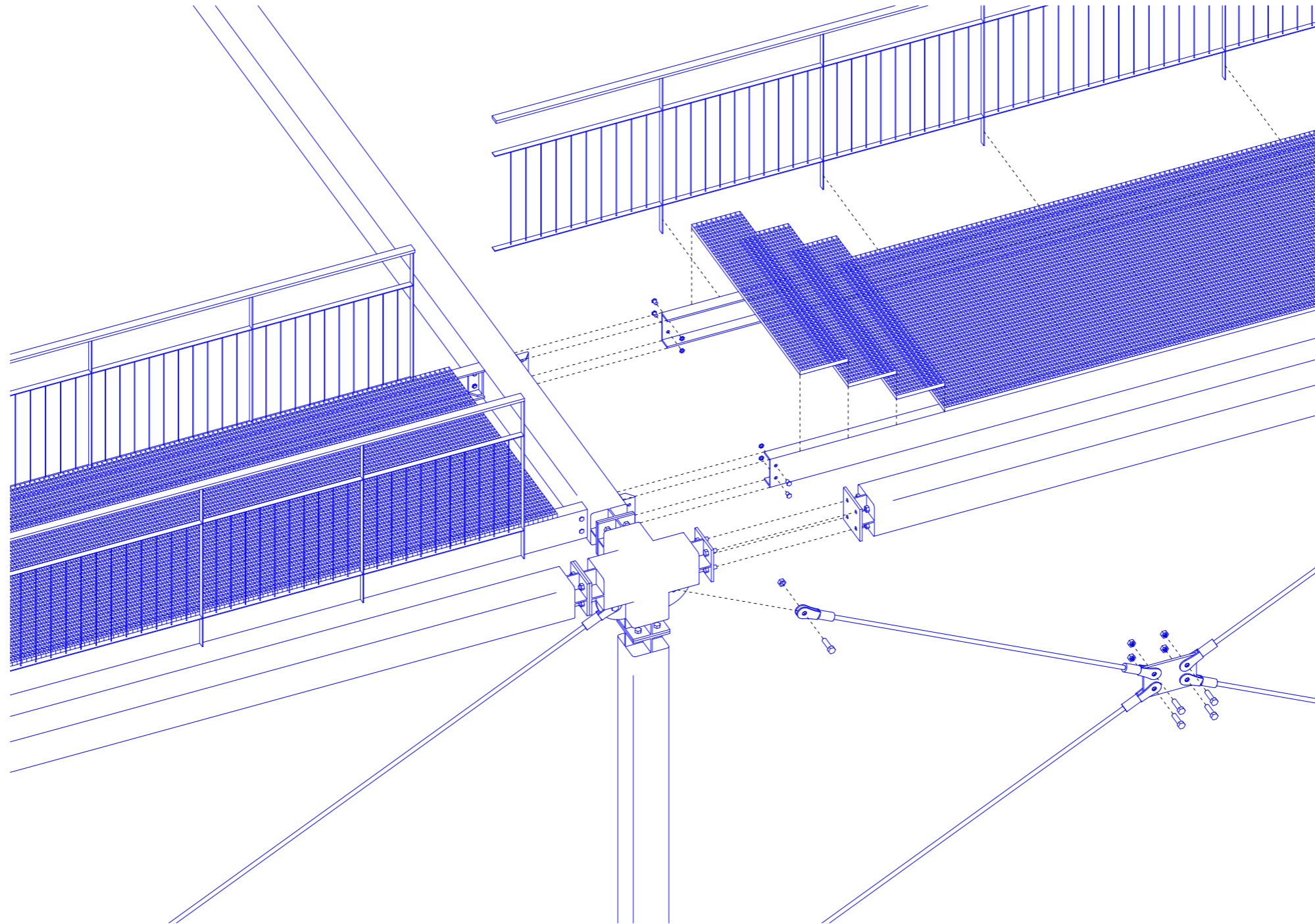
(partly) reused brick with 30mm protrusion
weather barrier
60+260mm hemp insulation, $R_d = 8,42 \text{ m}^2\text{K/W}$
pro clima intello vapour retarder
18mm plywood
12mm gypsum fibre board



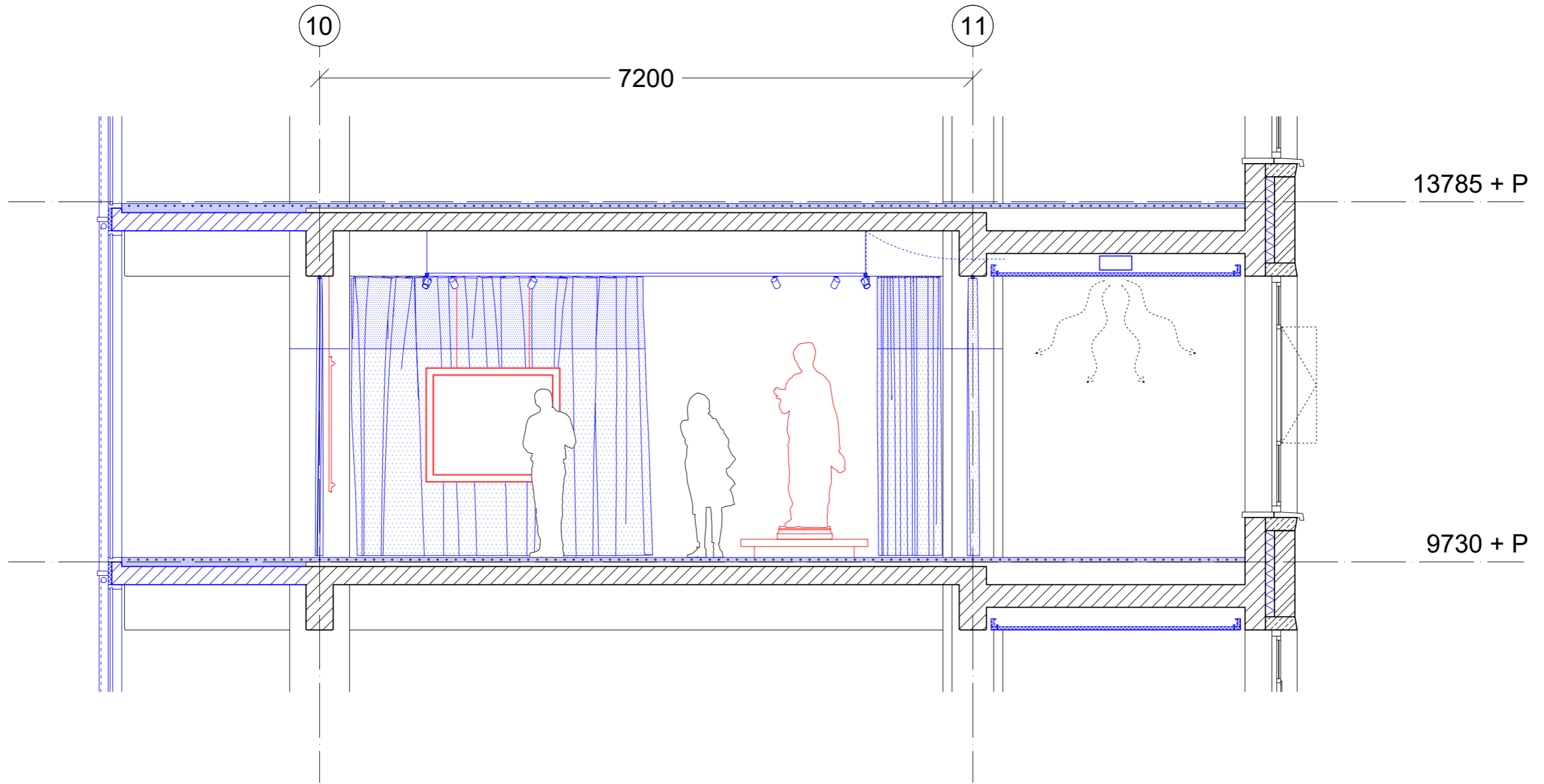
frame
structural diagram
1:200



frame
assemblage



warehouse
gallery section
1:50

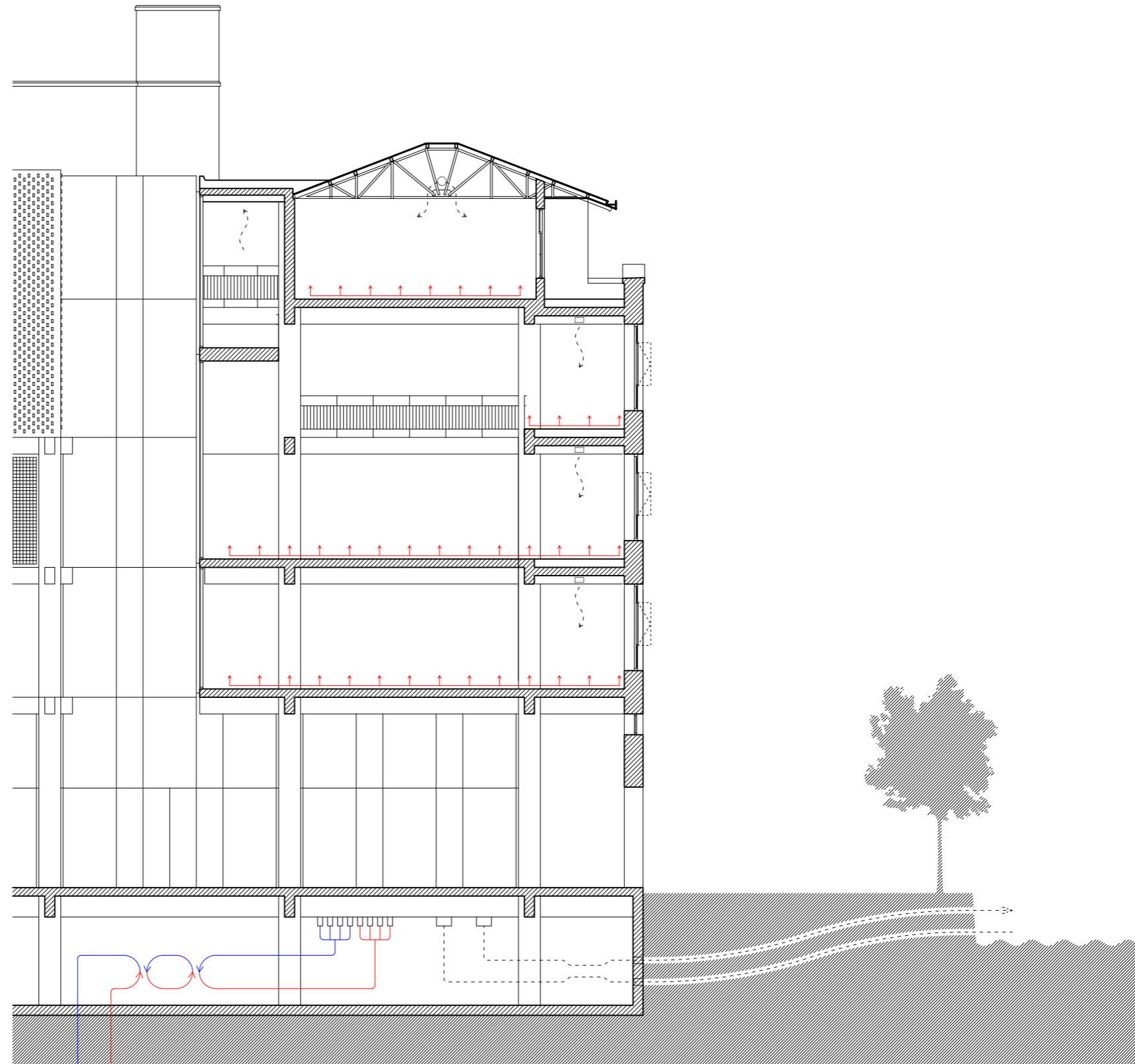


climate design
zoning



warehouse

climate scheme, winter situation

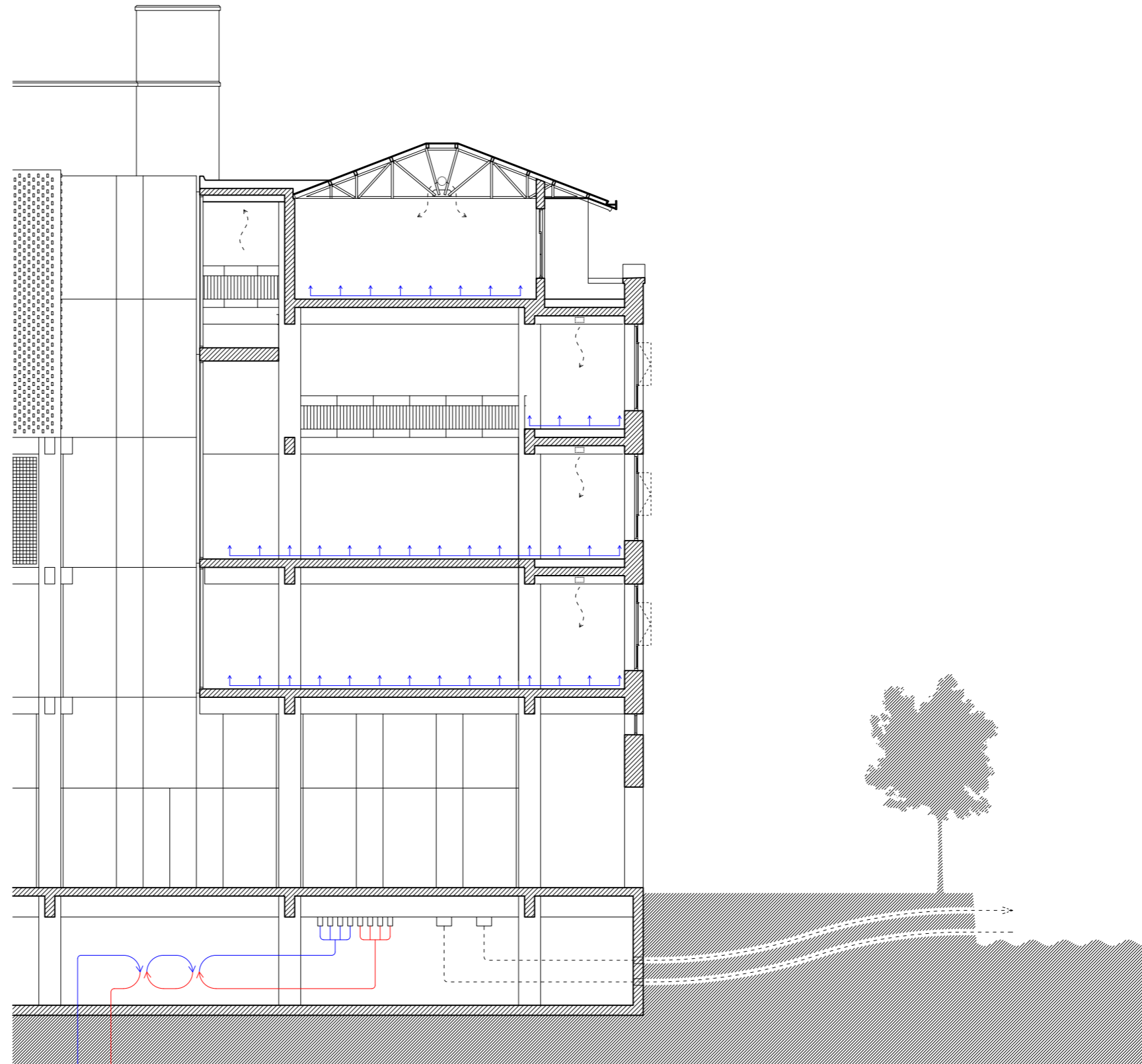


heating:
ground-coupled heat exchanger
heat pump
floor heating

ventilation:
heat exchanger

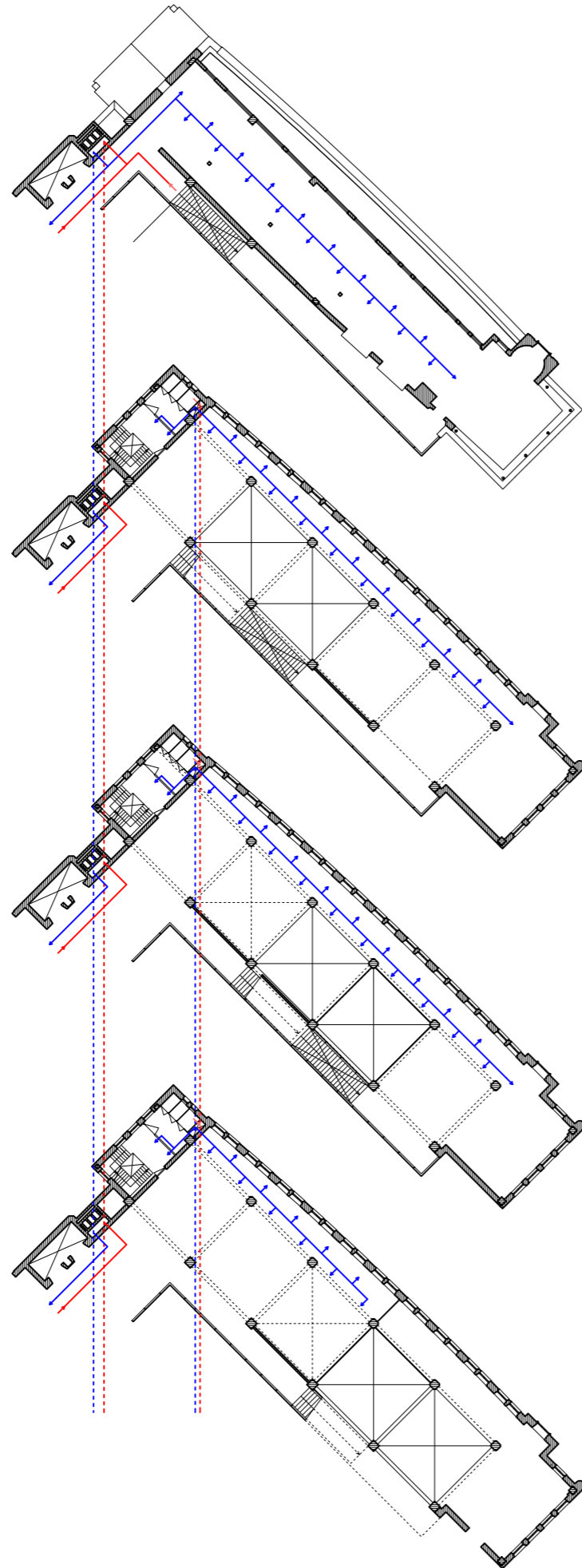
warehouse

climate scheme, summer situation



cooling:
ground-coupled heat exchanger
heat pump
floor heating

warehouse
ventilation calculations



occupation: **160 people** (1600m²)
ventilating regulations (Bouwbesluit 2012): **4dm³/s/person**
 $V_{max} = 3m/s$

total ventilation: **664dm³/s**
duct: $664dm^3/s : 3m/s = 22,1dm^2 = \text{ø}530mm$

04 museum
floor area: **420m²**
occupation: **42 people**
ventilation: $42 \times 4dm^3/s/person = 168dm^3/s$
duct: $168dm^3/s : 3m/s = 5,6dm^2 = 200 \times 280mm$

03 museum
floor area: **390m²**
occupation: **39 people**
ventilation: $39 \times 4dm^3/s/person = 156dm^3/s$
duct: $156dm^3/s : 3m/s = 5,2dm^2 = 200 \times 260mm$

addendum
toilet: $2 \times 7dm^3/s = 14dm^3/s$
staircase: $16m^3 \times 0,5 dm^3/s/m^2 = 8dm^3/s$
ventilation: **24dm³/s**

02 museum
floor area: **390m²**
occupation: **39 people**
ventilation: $39 \times 4dm^3/s/person = 156dm^3/s$
duct: $156dm^3/s : 3m/s = 5,2dm^2 = 200 \times 260mm$

addendum
toilet: $2 \times 7dm^3/s = 14dm^3/s$
staircase: $16m^3 \times 0,5 dm^3/s/m^2 = 8dm^3/s$
ventilation: **24dm³/s**

01 museum
floor area: **280m²**
occupation: **28 people**
ventilation: $28 \times 4dm^3/s/person = 112dm^3/s$
duct: $112dm^3/s : 3m/s = 3,7dm^2 = 200 \times 190mm$

addendum
toilet: $2 \times 7dm^3/s = 14dm^3/s$
staircase: $16m^3 \times 0,5 dm^3/s/m^2 = 8dm^3/s$
ventilation: **24dm³/s**