

MATERIALS

Collection of exististing resources
Hospital North, Aalborg

Case Study

Case study, exploring materials
Diploma 2023

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CONTENT

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CHAPTER 1.

Technical drawings

”
Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. ”

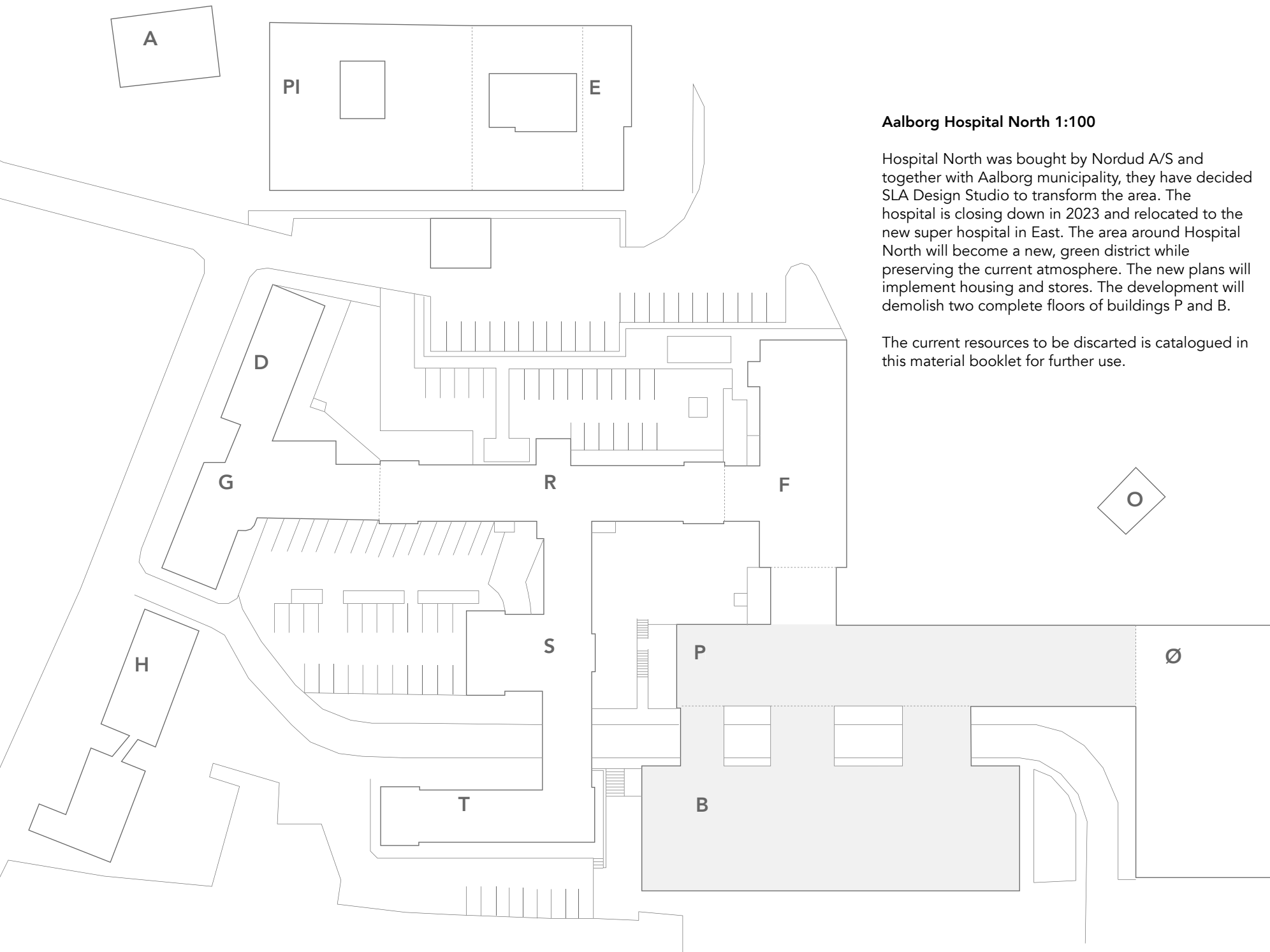
Brundtland Commission, 1987
On the overall goal of sustainable development



Hospital North
Arkiv.dk



Hospital North
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Aalborg Hospital North 1:100

Hospital North was bought by Nordud A/S and together with Aalborg municipality, they have decided SLA Design Studio to transform the area. The hospital is closing down in 2023 and relocated to the new super hospital in East. The area around Hospital North will become a new, green district while preserving the current atmosphere. The new plans will implement housing and stores. The development will demolish two complete floors of buildings P and B.

The current resources to be discarded is catalogued in this material booklet for further use.



Illustration of the new housing district
SLA



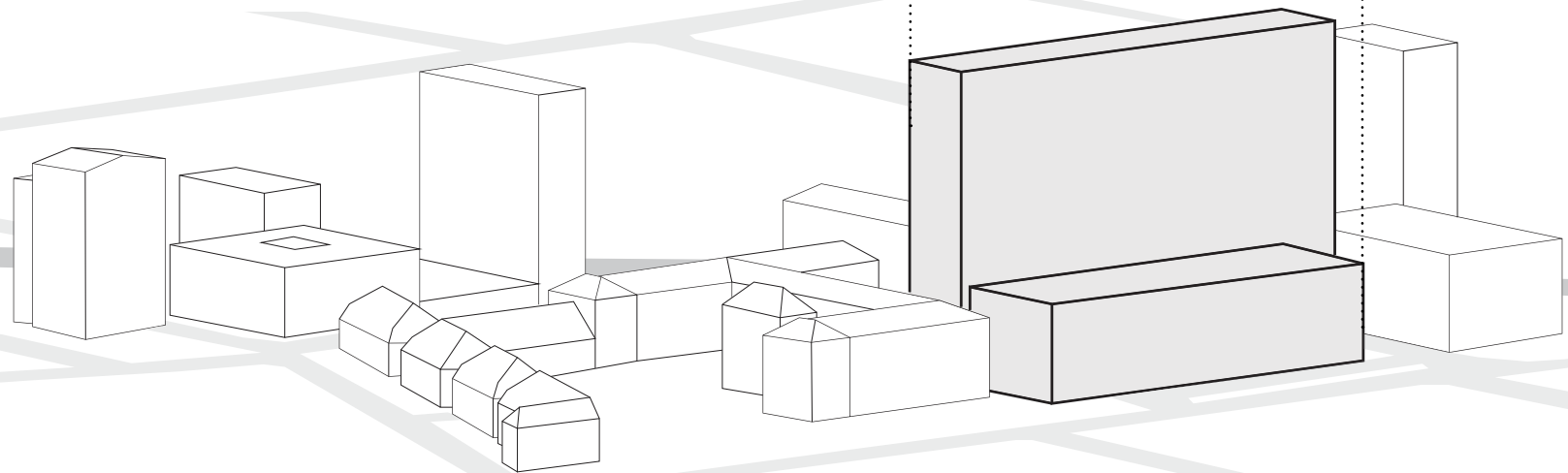
Trainline

Building P
Height: 52,5m
Width: 14m
Length: 77,4m

163 kWh/m² annually

Building B
Height: 20m
Width: 19,7m
Length: 64,7m

157 kWh/m² annually

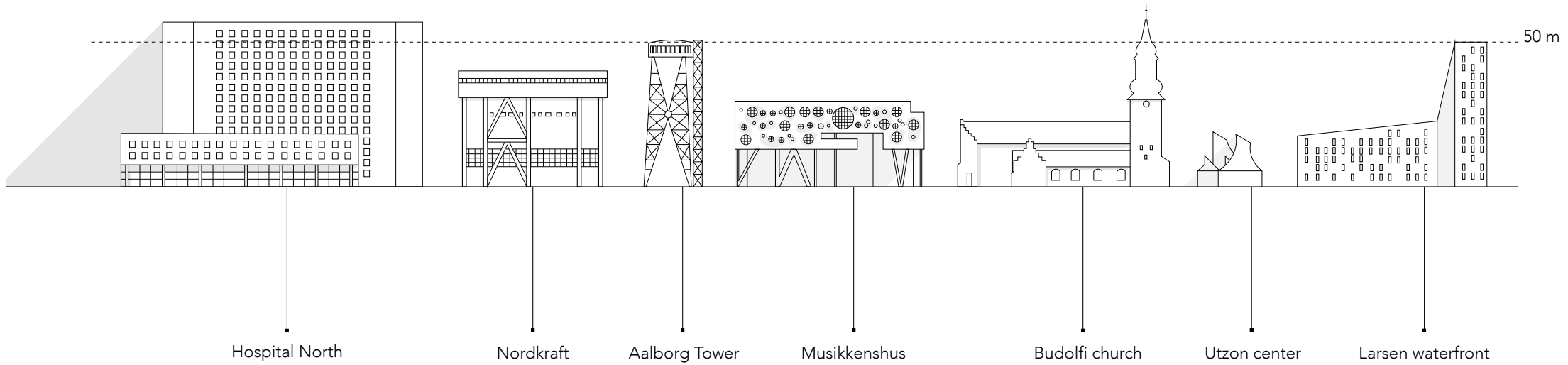


Context and typology

Arkiv.dk
Aalborg Hospital North
1976-1990



Aalborg monuments

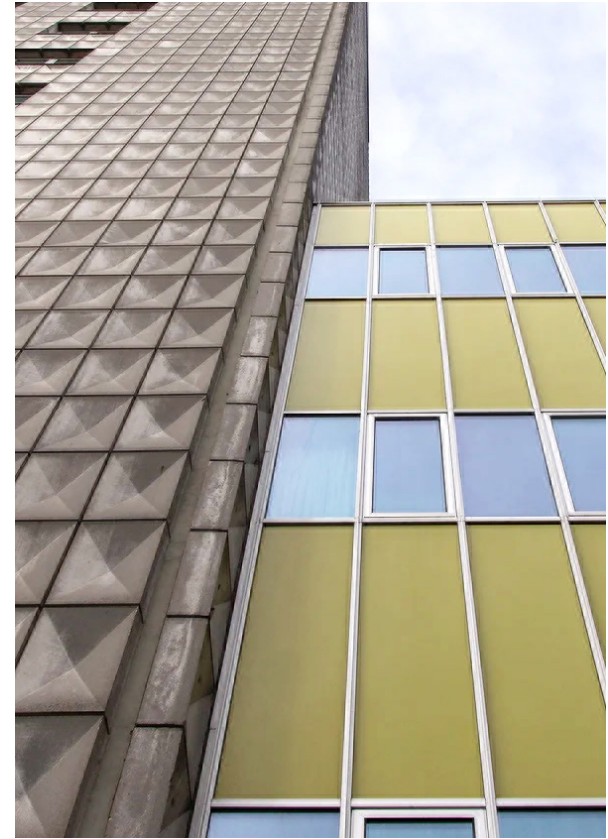
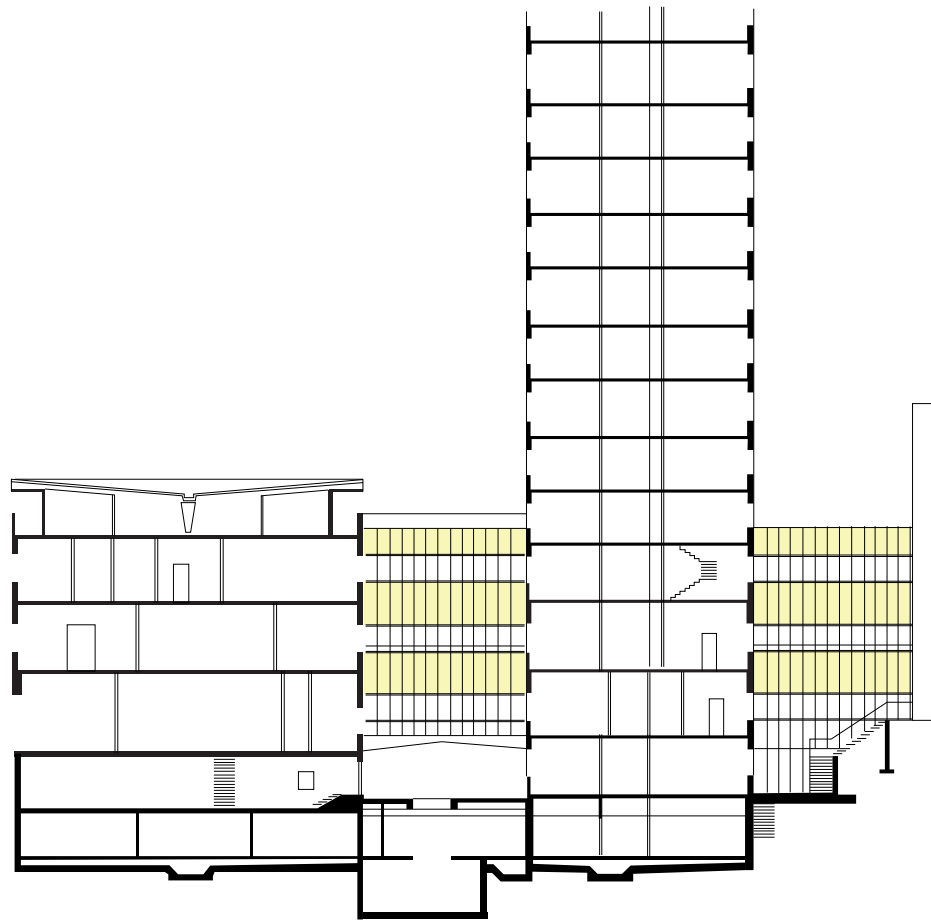


Building tectonics

Hospital North is the tallest complex in the whole municipality. The contrast between the old concrete tile buildings from 1914 and the new architecture from the major expansion in the early 1960's makes a blended building complex with different thresholds and material texture. The structural and symmetric construction makes the building easy to recognize and see through the city skyline.

The demolition and transformation of the complex creates an opportunity for saving materials and reduce CO2 emissions when constructing a new development. This is an investigation into the possible collection of materials and resources from the two main buildings.





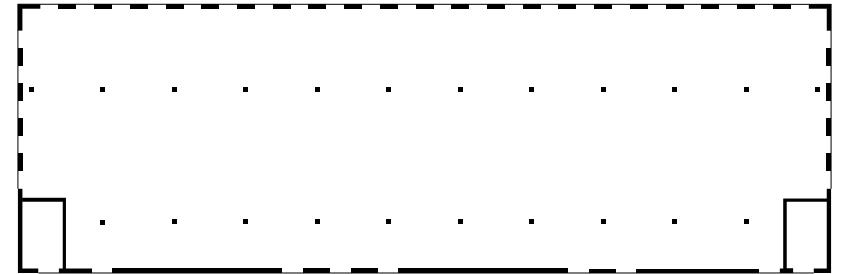
Hospital North
Archive foto: Torben Hansen

Building tectonics

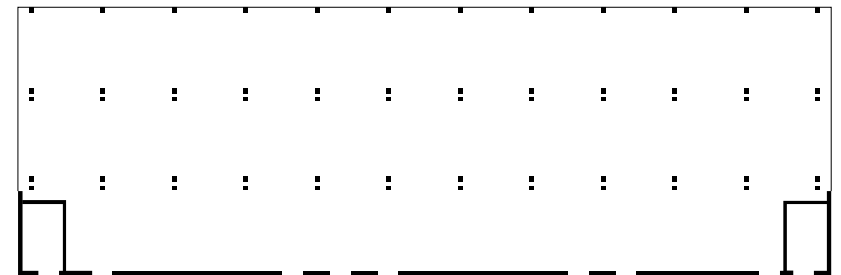
Construction

Building P and B have a construction that is built upon floor slabs supported by a column system. The concrete columns are centralized and used as facade-columns around the buildings. This makes the window organization set into a synchronized system. The core on the east and west side of each building is stabilized by a staircase and elevator shafts (only in building P). The tallest building, P, has an identical structure from the ground and up, all the way to the 13th floor. The lower building is stabilized the same, with a core from the ground and up and has double columns on the first floor.

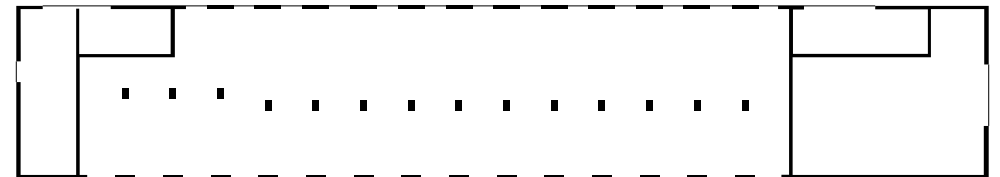
1:600
Technical plans



2nd and 3rd floor



Ground floor & 1st floor

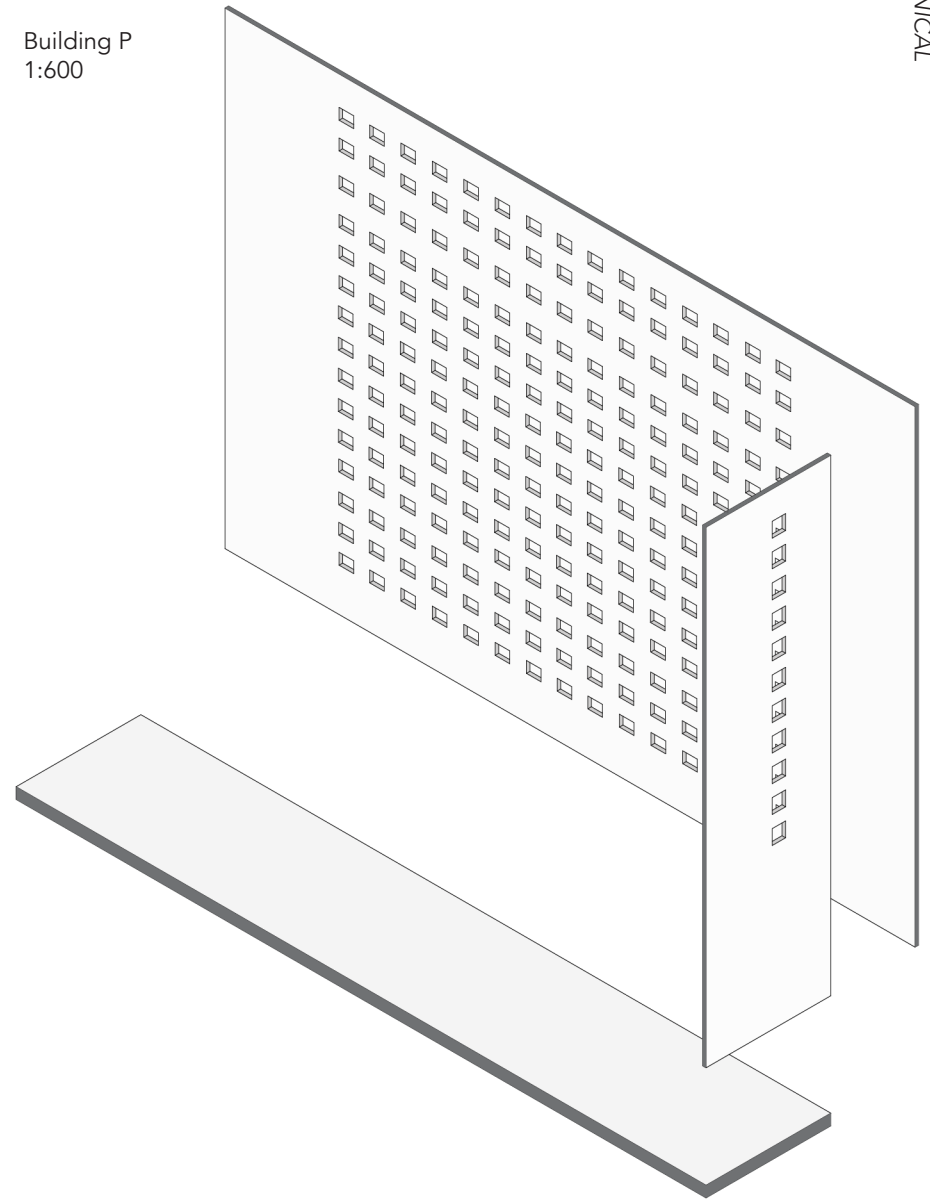




I-I

LENSESNIT E E

Building P
1:600



TECHNICAL

CHAPTER 2.

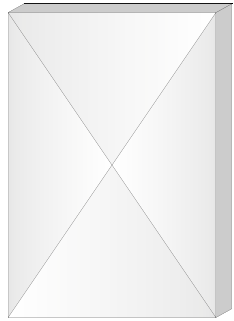
Materials, details

”
*Today, we respectfully accept the
challenges of tomorrow because we
believe in the future.*”

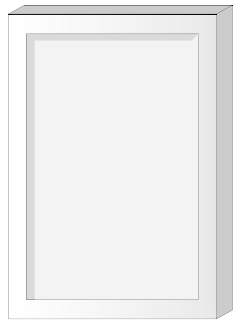
Lendager Group, 2023



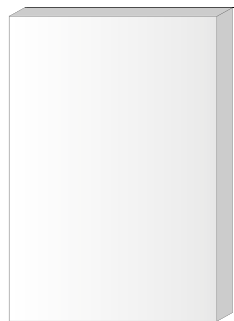
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Concrete tile 1.
Textures inwards
Building P

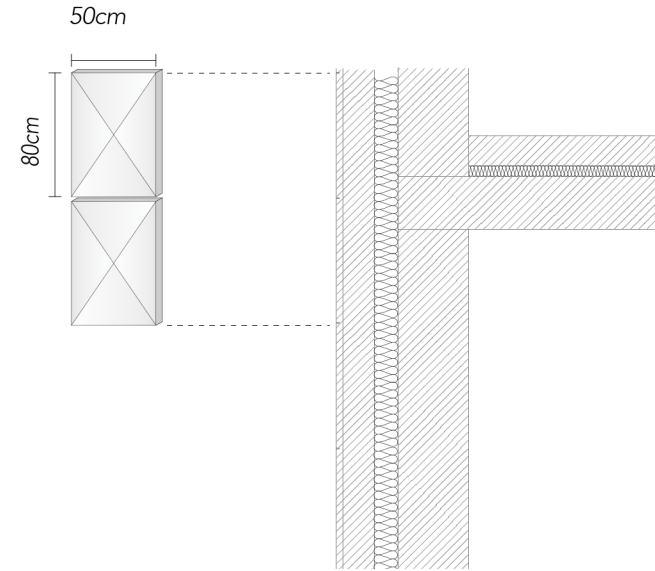


Concrete tile 2.
Textured depth



Concrete tile 3.
Blank

1:20 Facade details



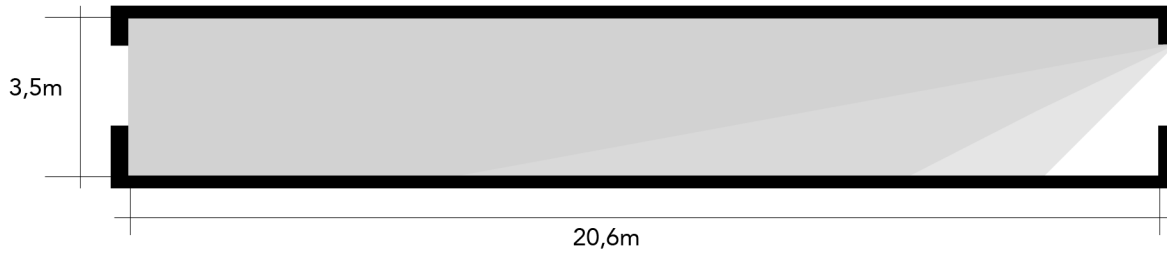
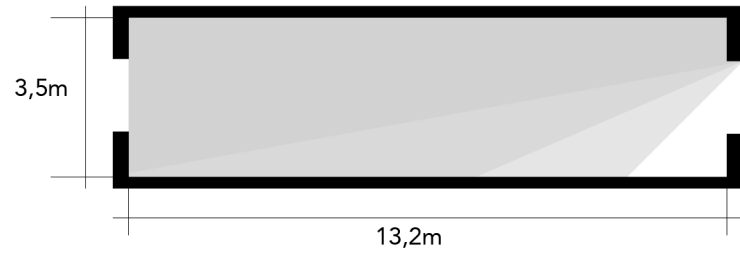
WALL

- 100mm concrete facade element (+concrete tiles)
- 62mm mineral wool insulation
- 88mm load bearing concrete facade column

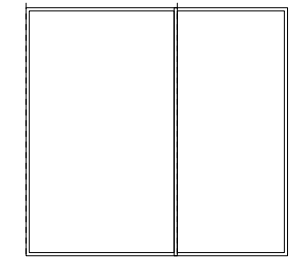
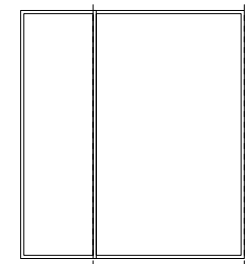
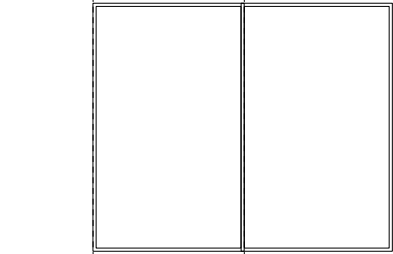
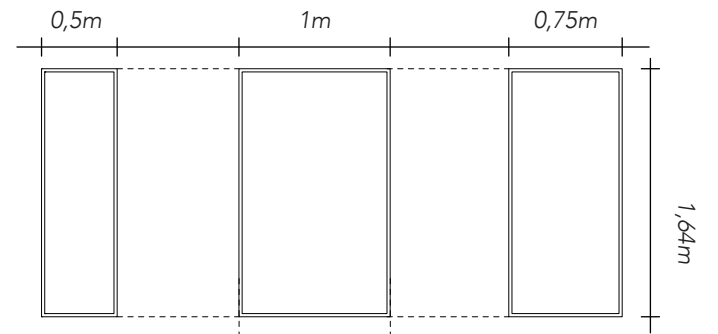
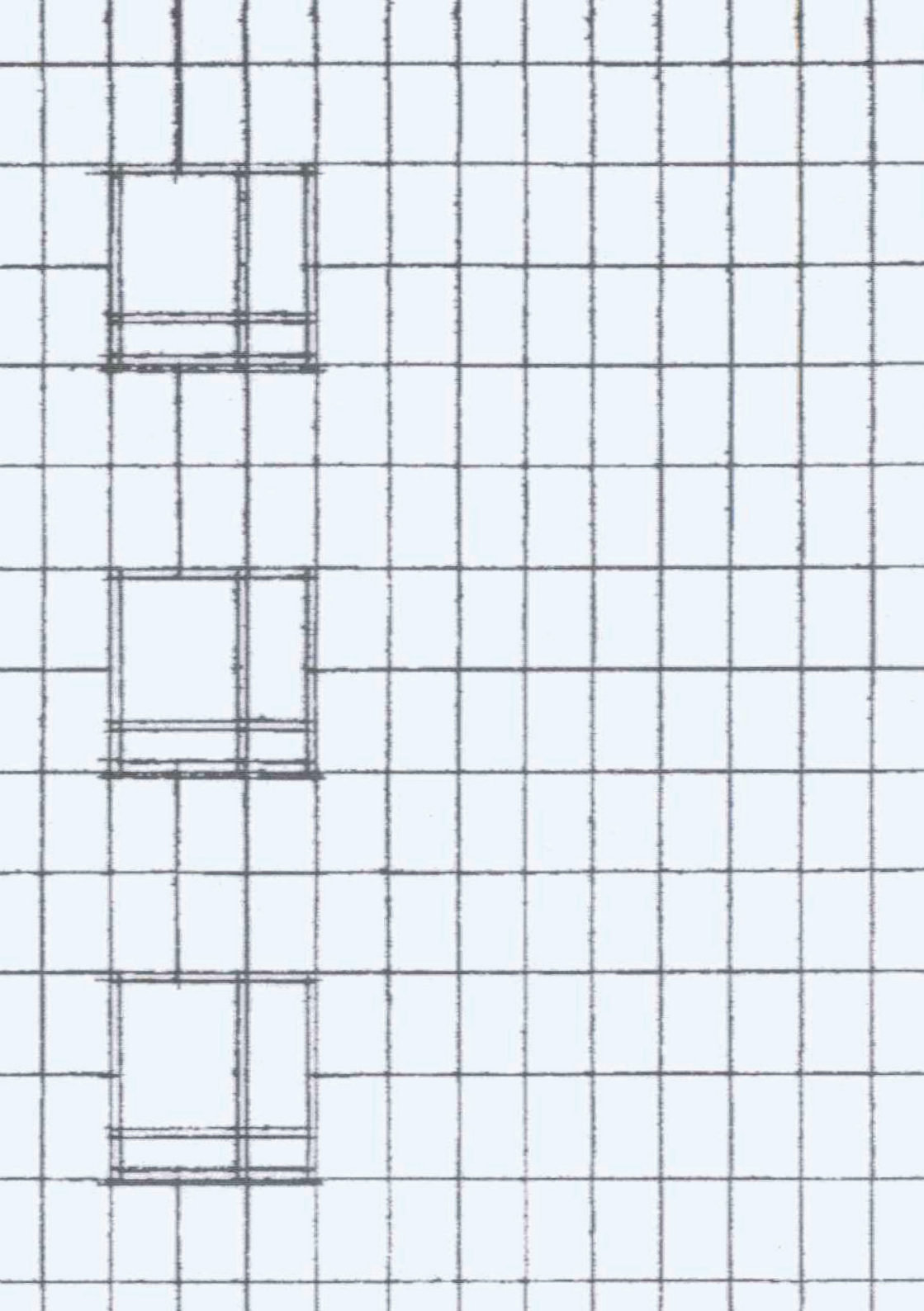
FLOOR SLAB

- 18mm concrete
- 30mm mineral wool insulation
- 140mm load bearing concrete slab

1:600
Window/ light study



Building P, patient room

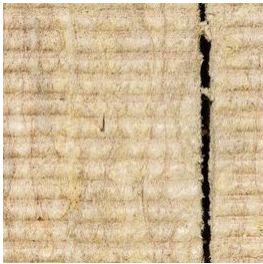


(M)
213 elemets (1,64x0.5)
213 elemets (1,64x1,0)
426 elemets (1,64x0,75)

1:50
Window settings



CONCRETE
8.372 (m³)



MINERAL WOOL
1.627 (m³)



WINDOWS
213 pieces - 1,64x0,5 (m)
213 pieces - 1,64x1 (m)
426 pieces - 1,64x0,75 (m)



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CHAPTER 3.

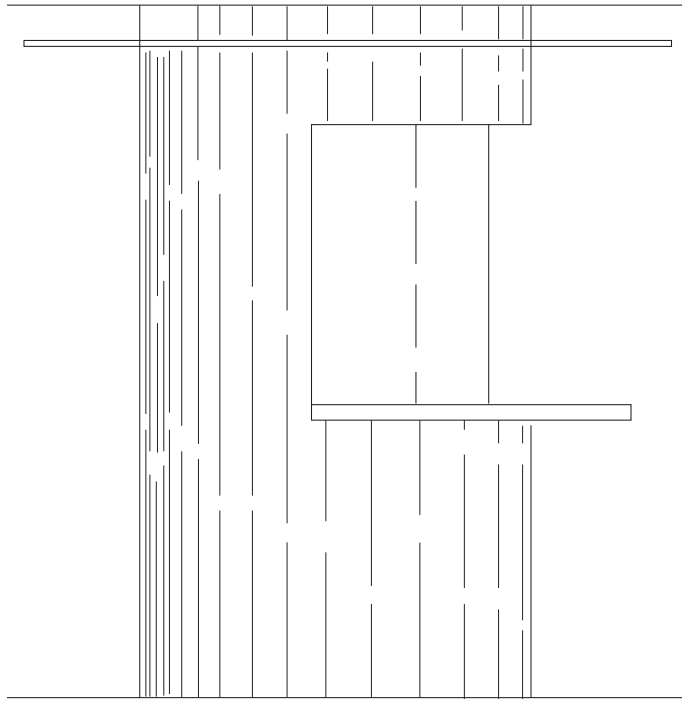
Interior



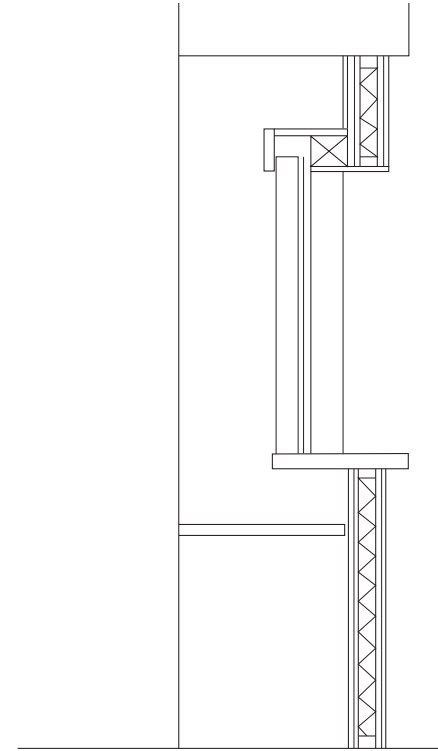
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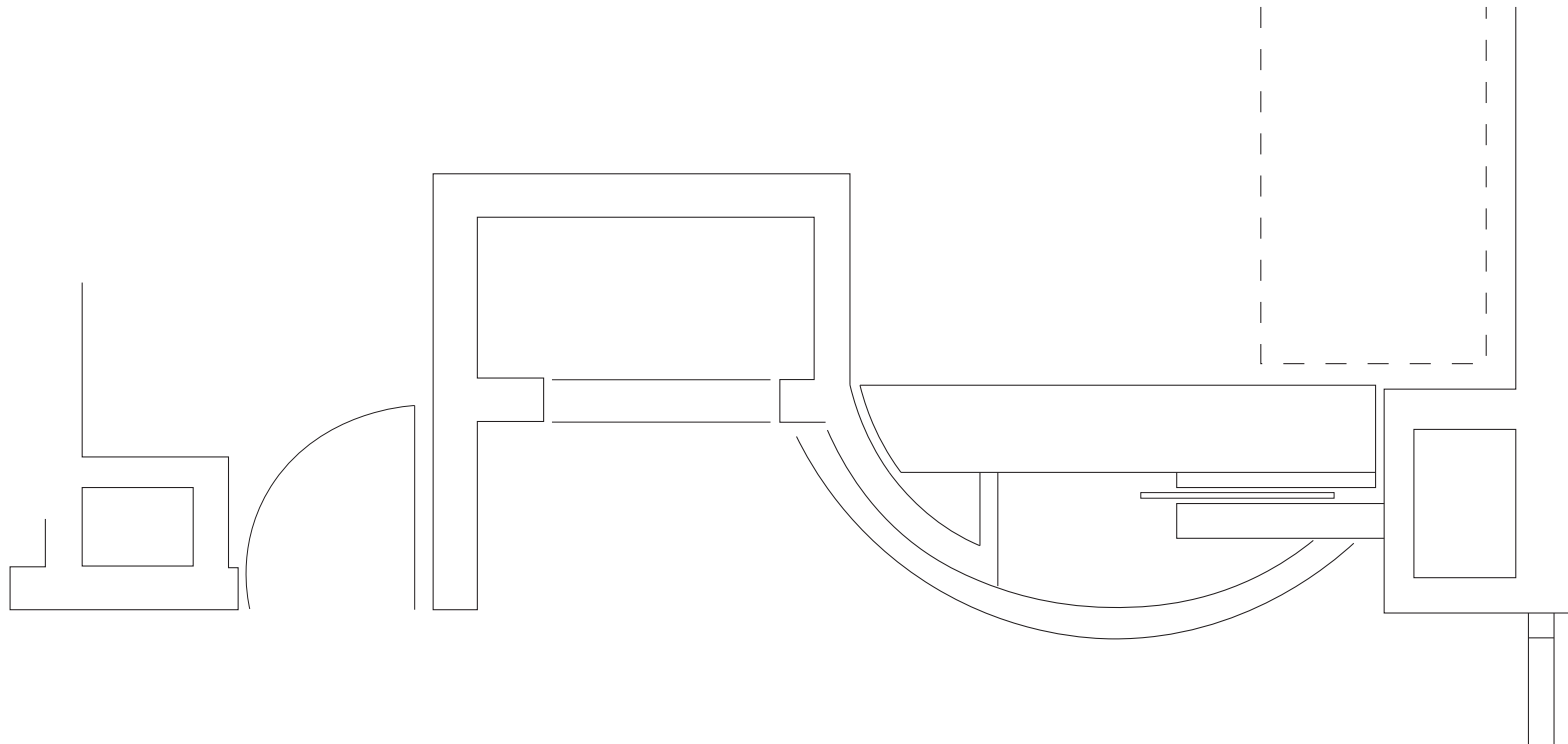


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Counter, first floor

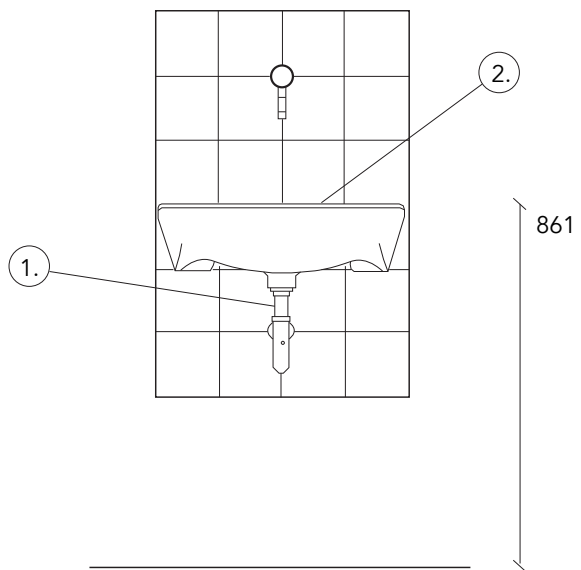




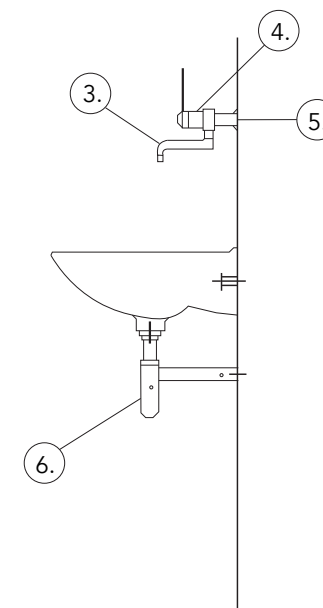
Drywall: as Gyproc XR 70/70 202 M 45.UK above deck.

Counter: in cement-bonded chipboard with glued-on laminate PP 7571 G on all visible surfaces, including the bottom.

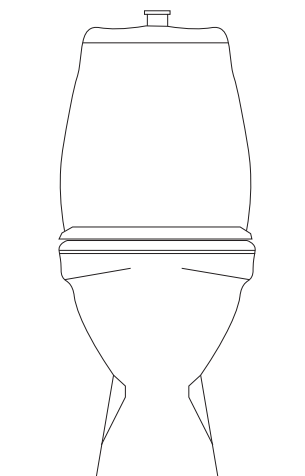
Sliding glass door: tempered glass with ground edges 2 D-line handle. No bottom rail when opening the hatch.



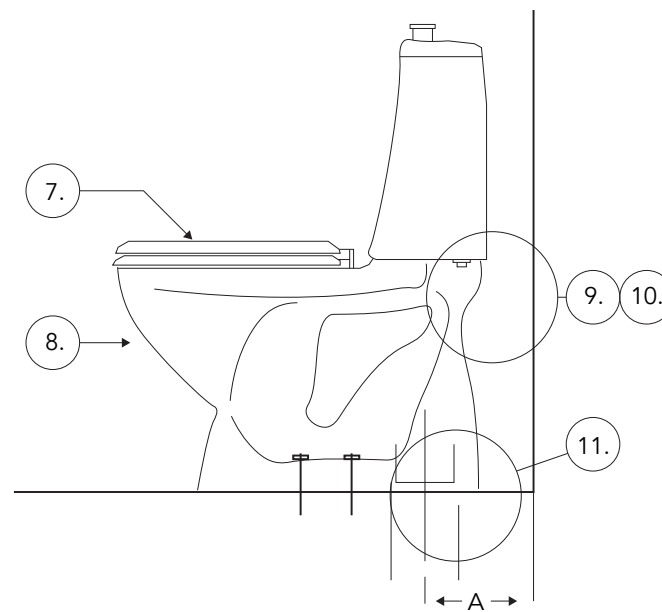
- x19/ 2 floors
 1. Bottom valve
 2. Sink IFØ 2760



- x19/ 2 floors
 3. S-tud, with cross in outlet
 4. Mixing battery ORAS
 5. VANO - bloc
 6. Water wallet lock



2x10 - 2 floors



20x/ 2 floors

- 7. Seat
- 8. Toilet, IFØ CERA
- 9. Shut-off valve
- 10. Coupling wire
- 11. Toilet connection

