



APART BUT TOGETHER

GROUP 7

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INTRODUCTION

ABOUT THE HEALTHCARE

"Health is a state of optimal physical, mental and social well-being, and not merely the absence of disease and infirmity."

"The health care system should adjust so that primary care is the hub of care and interacts with other health care and social services.

The goal of the restructuring of health care should be for the patient to receive good, close and coordinated care that strengthens health.

INTRODUCTION TO THE TASK

Vadstena Kommun is a municipality of about 7400 inhabitants in Östergötland County, in southeast Sweden.

The current Primary Care Center has about 7,500 listed patients and is located in an older building that is not suitable to modern standards. Therefore, the Region is planning a new building on a new site.

The project will contribute to the development of the healthcare regional system towards a "good quality, local health care", which means a modern, equitable, accessible, and effective health care, focusing on primary care.

The brief of about 3000 sqm gross area includes a primary care unit, specialist outpatient clinics, public dental care and a child and family health center.

The site is within the "Birgitta hospital area", a large area built for different healthcare services since the early 1900s.

On the site, one building is planned to be demolished, but another heritage building could be transformed and included as part of the new Primary Care Center.

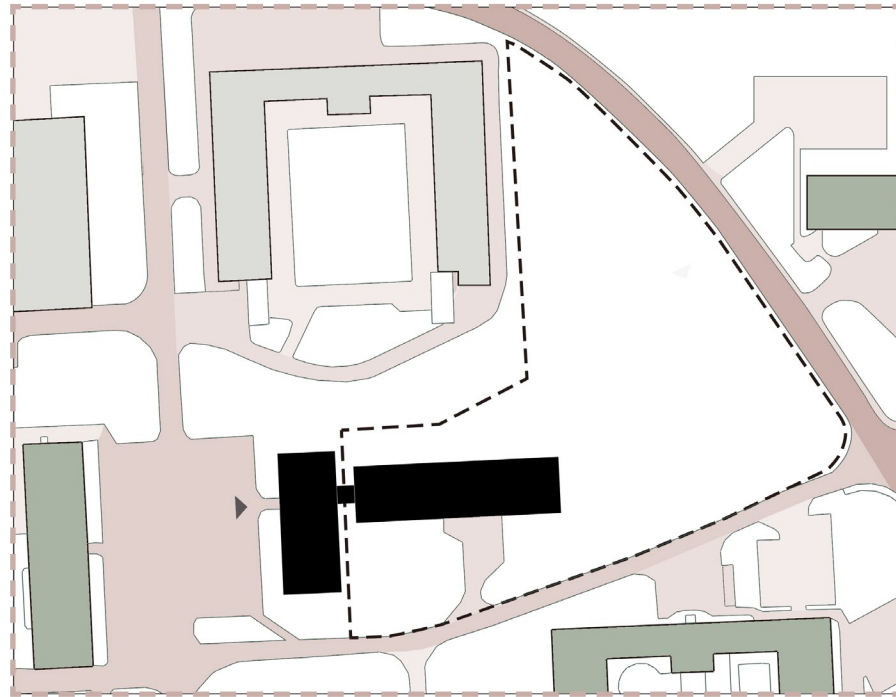


Vadstena, Östergötland

CONTENT

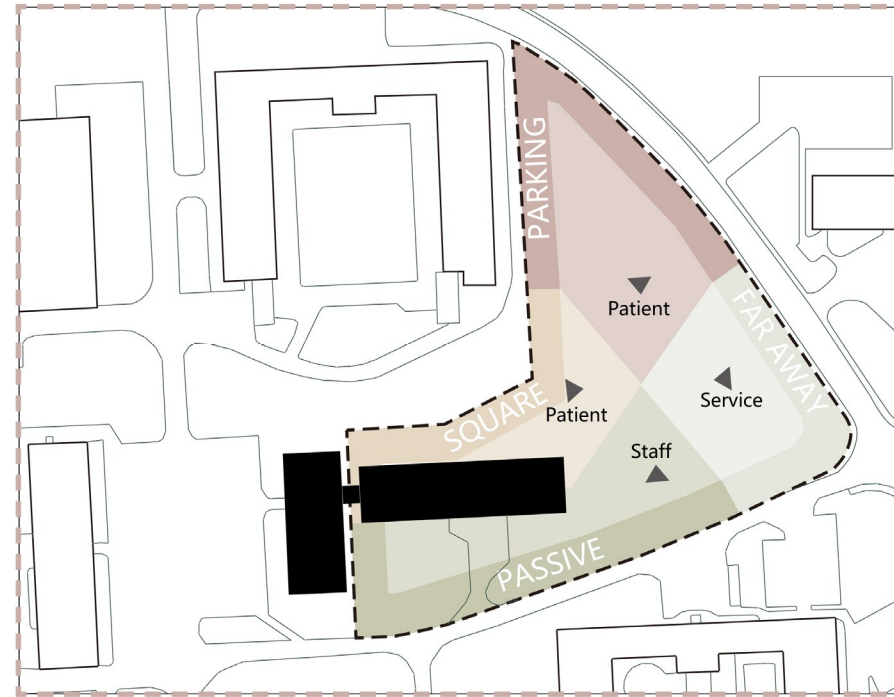
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SITE ANALYSIS



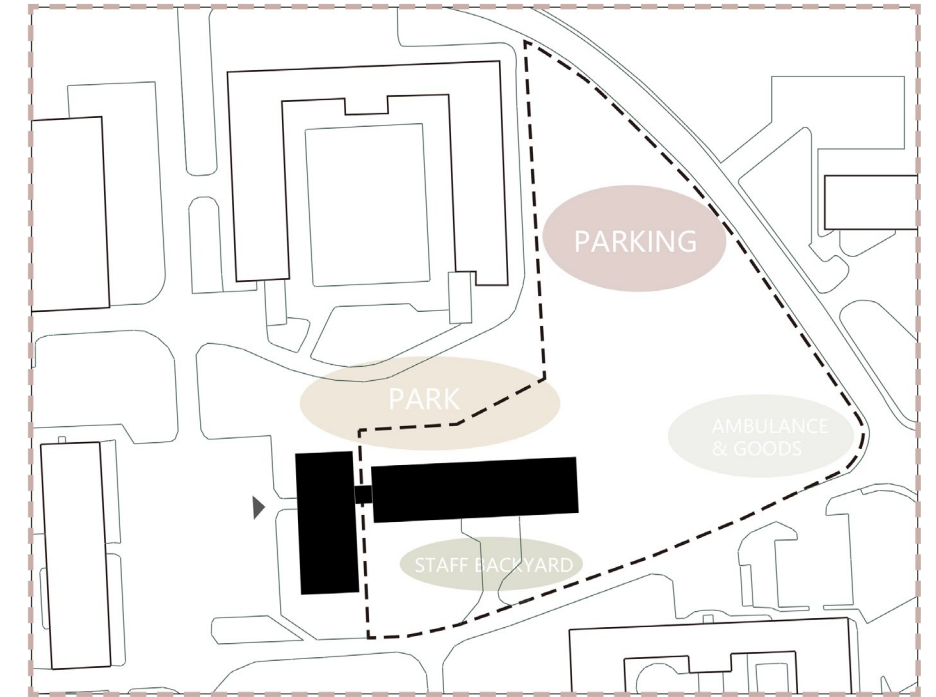
Road & Surrounding Function

- Project Building
- Main Road
- Side Road
- Pedestrians
- Private Housing
- Public Buildings



Flow Analysis

The flow coming from four directions of the site has its own characteristics, with birgitta square and the parking lot being the direction of most patients. The east side could be the flow coming from further away by vehicles, as well as the arrival of goods and ambulance. The south side has the least amount of traffic, making it a relatively passive space.



Potentials on the Site

Through the analysis of the flow on the site, we believe that the site has the appropriate potential. The space connected with Birgitta Square can be greened to guide the flow of people to the main entrance, while the east side can be used as a parking lot for staff, goods and ambulance for unloading.

DESIGN STRATEGIES

The project started with several design strategies that are taking into account various important aspects of the overall design of hospitals which were divided into four categories that are listed on the side.



VADSTENA KOMMUN

In creating our Design Strategies we were guided by plans that Vadstena Municipality wants to implement to the city in the near future, but also what seemed to us most desirable after getting acquainted with the place where Healthcare Center is going to be build.

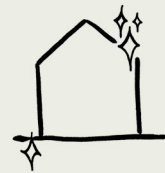
Our goal is to create a place that will bring something new to the community of Vadstena but with respect for the its heritage and we believe that thanks to our Design Strategies it is possible to create a healing, welcoming, and sustainable environment but also a place that is open for changes in the future if it's needed.

Some examples of what is planned in the sustainability work according to Vadstena Municipality:

- adoption of national transport challenge of a Fossil-free Sweden in 2030. This means that by 2030 at latest they must drive completely fossil-free.
- expansion of the cycle path network in the city.
- solarenergy to be more self-sufficient.

SITE & CONECTCS

FRESH TOUCH



New buildings' shape and facade will give a fresh touch to the site.

CLEAR ORIENTATION



Easy and clear orientation in and outside the building.

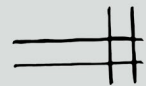
COMMUNITY ACTIVATION



Reopened and arranged Birgitta Square activates community in the area.

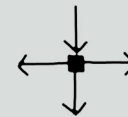
BRIEF & LOGISTIC

UNCOMPLICATED FLOW



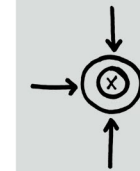
An easy flow in the building that facilitates the movmment of both patients and staff without possibilities of collision.

EASY ACCESS



Easy access will make it posible for staff to move around the building faster without entering patienns zone when it's not desirable.

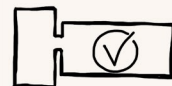
CENTRAL POINTS



Welcoming and open meeting points that will also help with orientation in the building

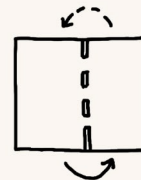
SUSTAINABILITY & FUTURE PROOFING

SAVING HERITAGE



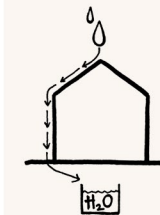
By keeping the existing building we are saving the heritage of Vadstena but also have possibility to use its basement for water management system.

FLEXIBLE MODULES



Flexible walls will give possibility of adapting the rooms to different situations.

WATER HARVESTING



Energy reduction for water treatment and transportation. Collected water can be used for flushing toilets, urinals supply and washing machines.

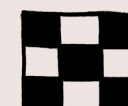
HEALTH PROMOTION

NATURAL ELEMENTS



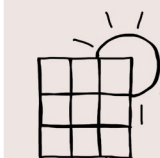
Green walls, wood and vegetation helps to create connection with nature and improve our well-being.

RIGHT COLORS



Colors will help with orientation in the building and improve well-being. Contrasts will make detailes such as doors and stairs more visible for visually impaired people.

DAYLIGHT



Implementation of right amount of light to help with work efficiency and to improve well-being.

CONCEPT DESIGN - 1

ENTRANCE DISTRIBUTION

According to the site analysis, the north side faces the parking lot, while the west side faces the Birgitta Square with more traffic, they can both serve the most of visitors and therefore become the main entrance. The east side near the road is more suitable to be the entrance/exit for ambulances and trucks, while the south side has less traffic and is noticed by fewer people will be used as the staff entrance.

USER DISTRIBUTION

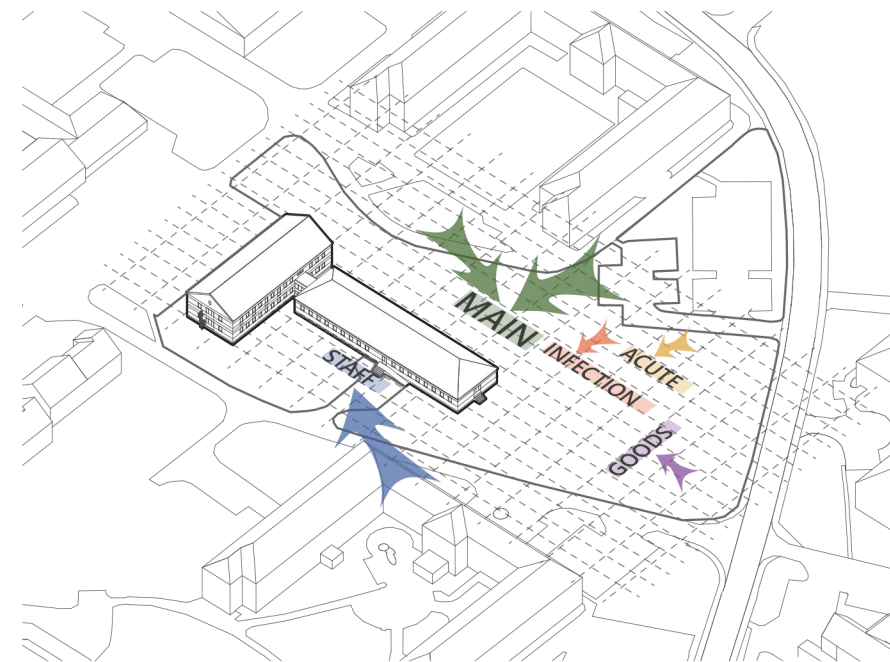
We have two general functional areas, the north part facing the main entrance will become the patient area, while the south part will become the staff area accordingly. Following the contour of the site, we set the main volume as L-shaped and arranged it around the patient entrance, so that the patient's entrance hall will become the most accessible and visible position.

SEPERATE FLOW

In order to achieve the separation of patient and staff flow, we chose the Double-corridor structure. So we added a corridor next to the old building, and these two parallel corridors became our main logic for organizing the space. We applied this logic to both the old and the new building, and they are correspondingly L-shaped which are the same as volumes.

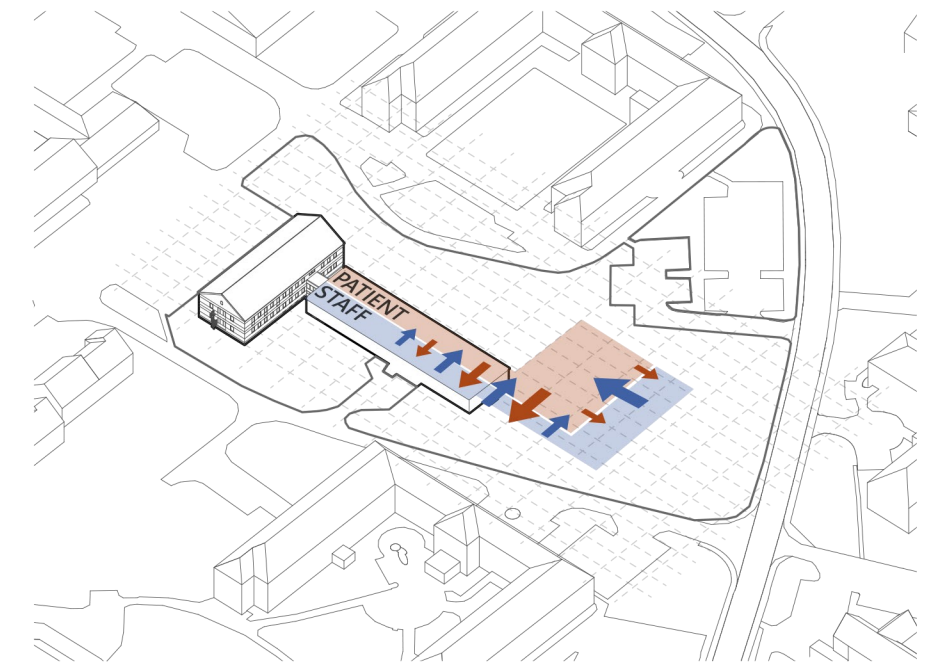
AREA DISTRIBUTION

The two parallel corridors help us to define the division of space and function. The middle part between two parallel corridors is the mixed area which will become various functional exam rooms or even a courtyard, shared by staff and doctors. Both sides of the two corridors are exclusive areas for patients and staff, and their usual movements will not be conflicted, they will only see each other in the exam room.



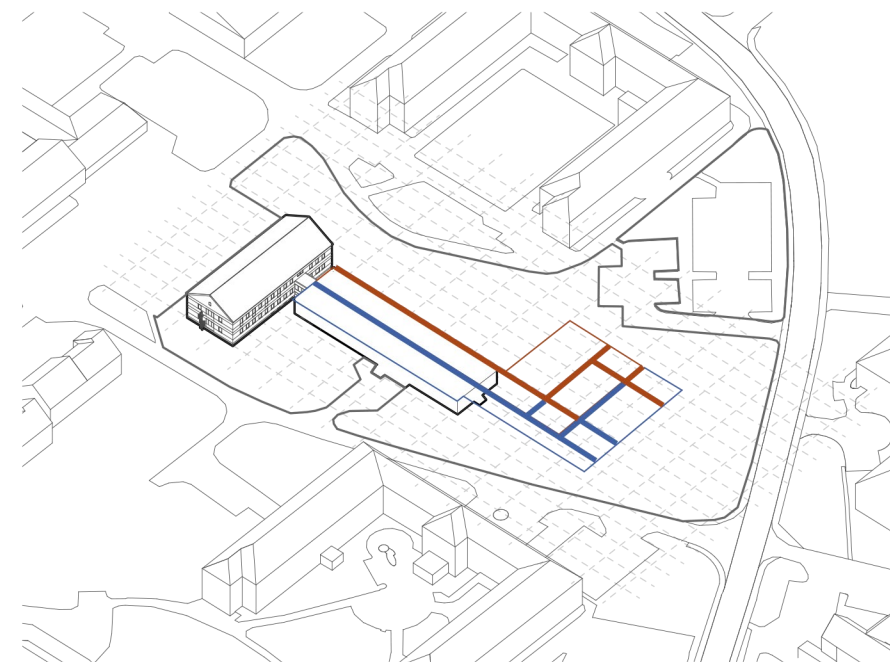
Entrance Distribution

- Main Entrance
- Infection Entrance
- Acute Entrance
- Goods Entrance
- Staff Entrance



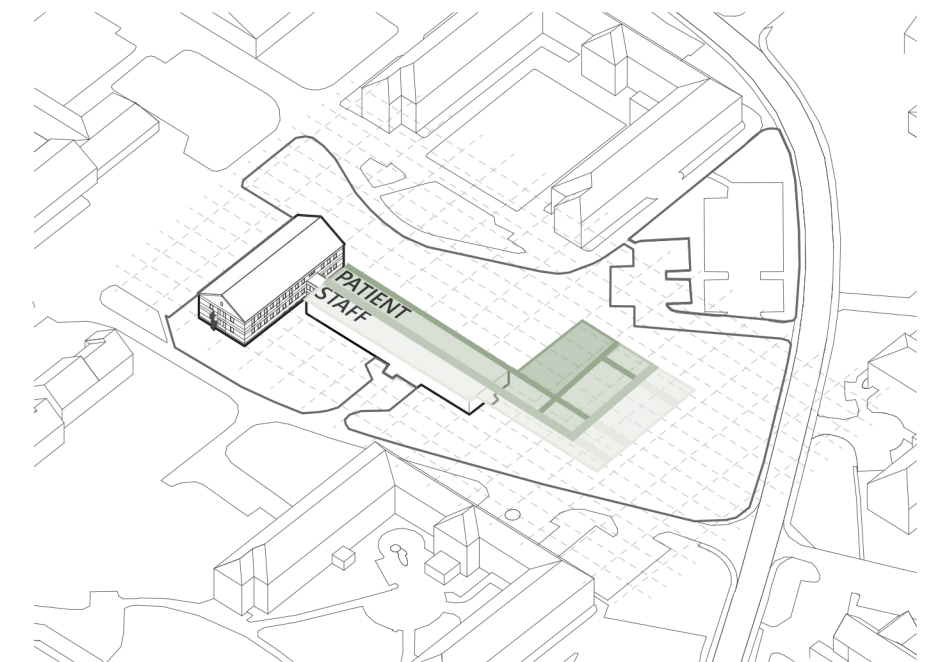
User Distribution

Separate patient area and staff area by corridor type can create more efficiency and accessibility to the healthcare centre.



Flow Separate

Separate the flows and to fit inside the shape to make the building well-used for the users.



Area Distribution

Distribute the mixed area, patients' area and staffs' area to fit inside the shape.

CONCEPT DESIGN - 2

FUNCTIONAL AREA DISTRIBUTION

After clarifying the users of the space, we considered some special functional spaces. For example, the infectious exam room needs a special entrance, and its flow line must be separated from the main entrance. In addition, the space for goods store and supply be close to the goods entrance and convenient for trucks to reach from the main road.

STRETCHING VOLUME

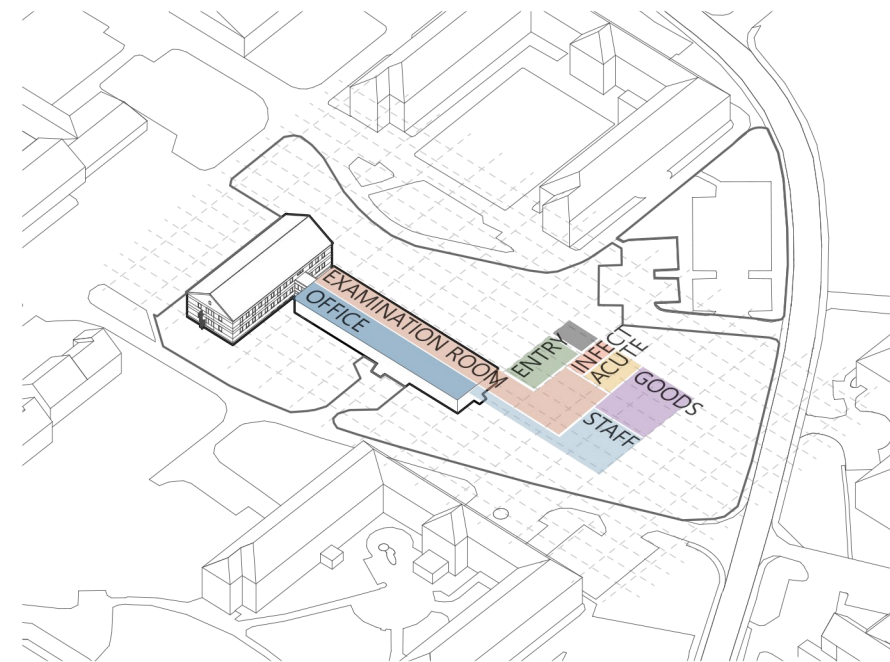
In order to fulfill the requirements of functional area, we set up a two-story volume and used the techniques of overhead space, atrium and inner courtyard in this volume to enrich the spatial experience, and also to meet the requirements of natural light and healing of the primary care center.

SHAPING VOLUME

We have kept the form of the old building's sloped roof to continue the architectural form of Vadstena. For the new building, we made some changes of the sloped roof to ensure drainage while using the courtyard to collect rainwater, thus purifying it could make benefits to achieve the goal of sustainable development.

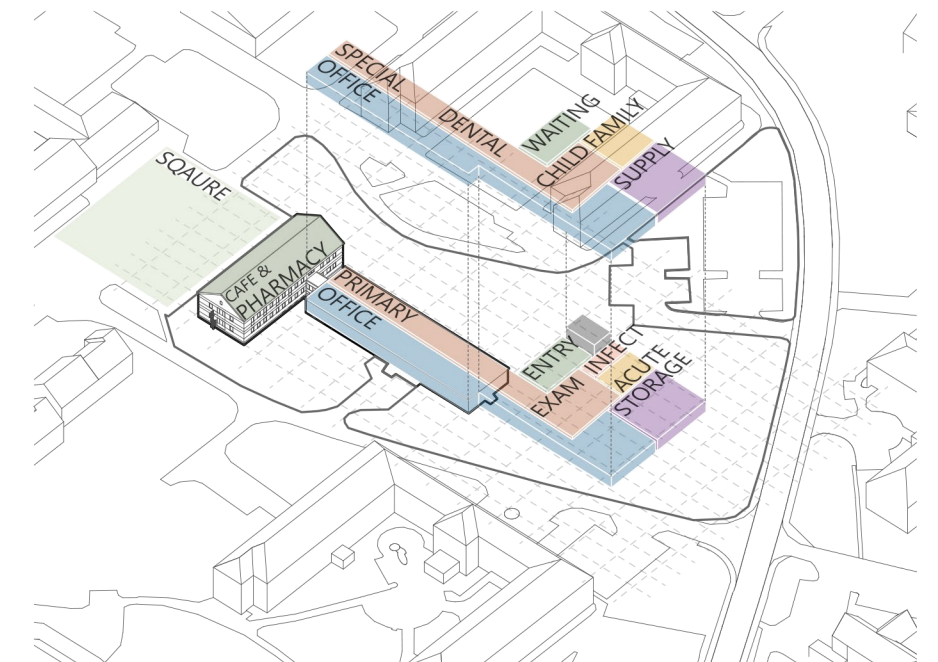
SHAPING OUTSIDE VOLUME

We preserved the trees and parking areas on the site and added some places for ambulance and truck loading and staff parking. We tried to preserve the original landscape as much as possible.



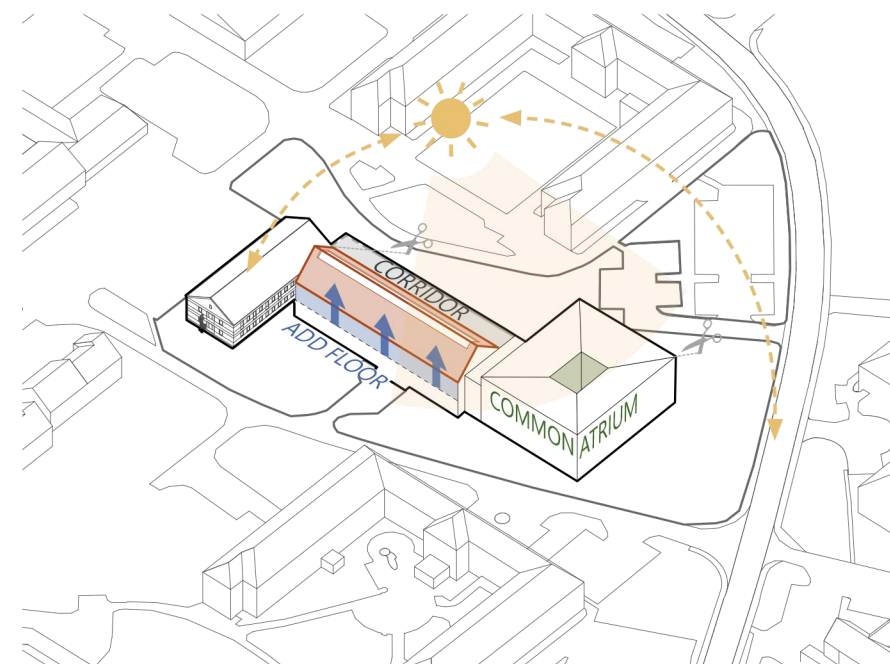
Functional Area Distribution

- Examination
- Infection
- Reception
- Goods
- Acute
- Staff
- Overhead Space



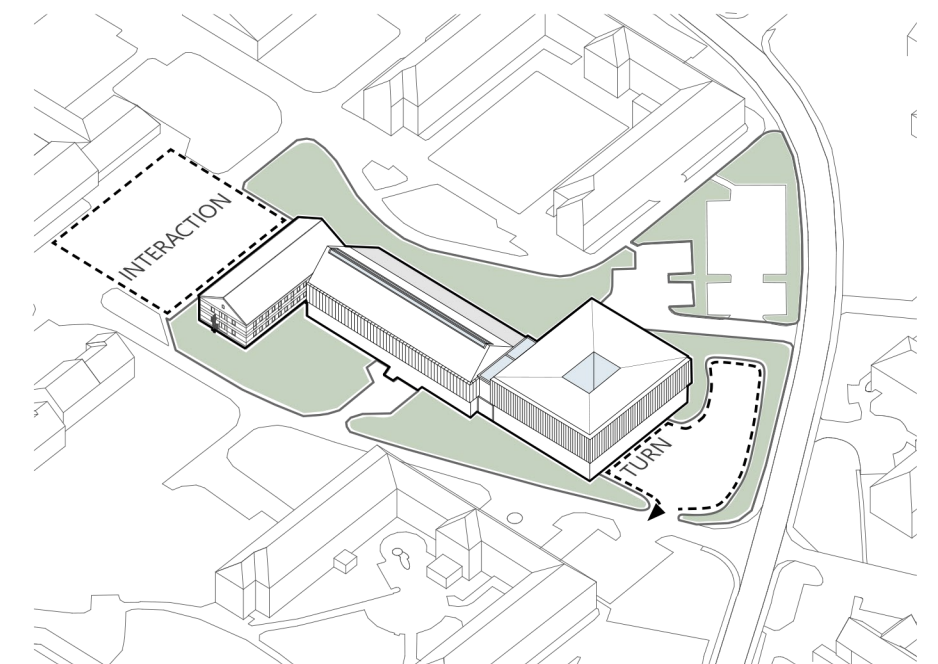
Stretching Volume

- Examination
- Infection
- Reception
- Goods
- Acute
- Staff
- Office
- Activated Square
- Public Space



Shaping Volume

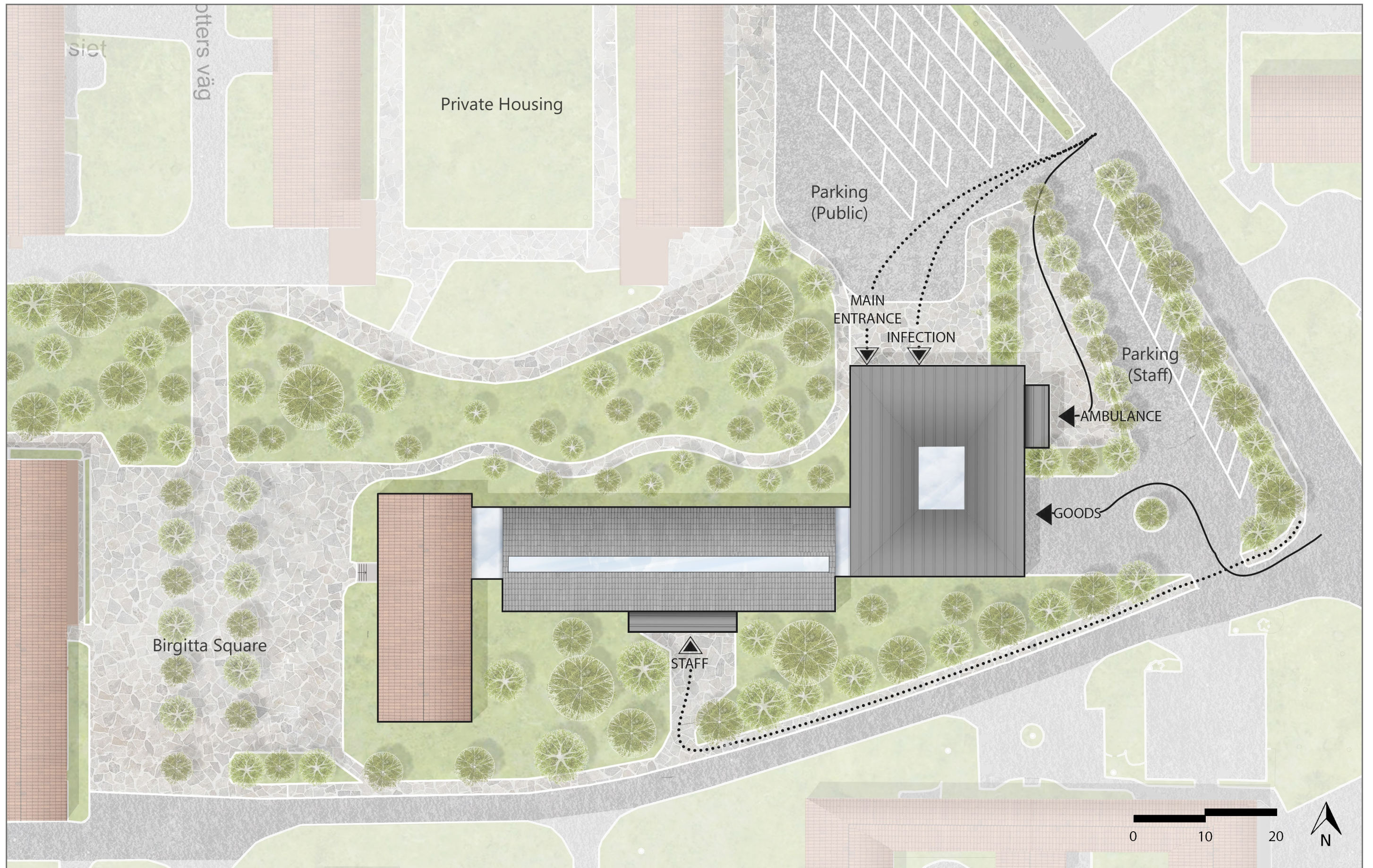
Skylights bring natural light into the building, corresponding to the shared atrium inside and also a way to separate patients and staff.



Shaping Outside Form

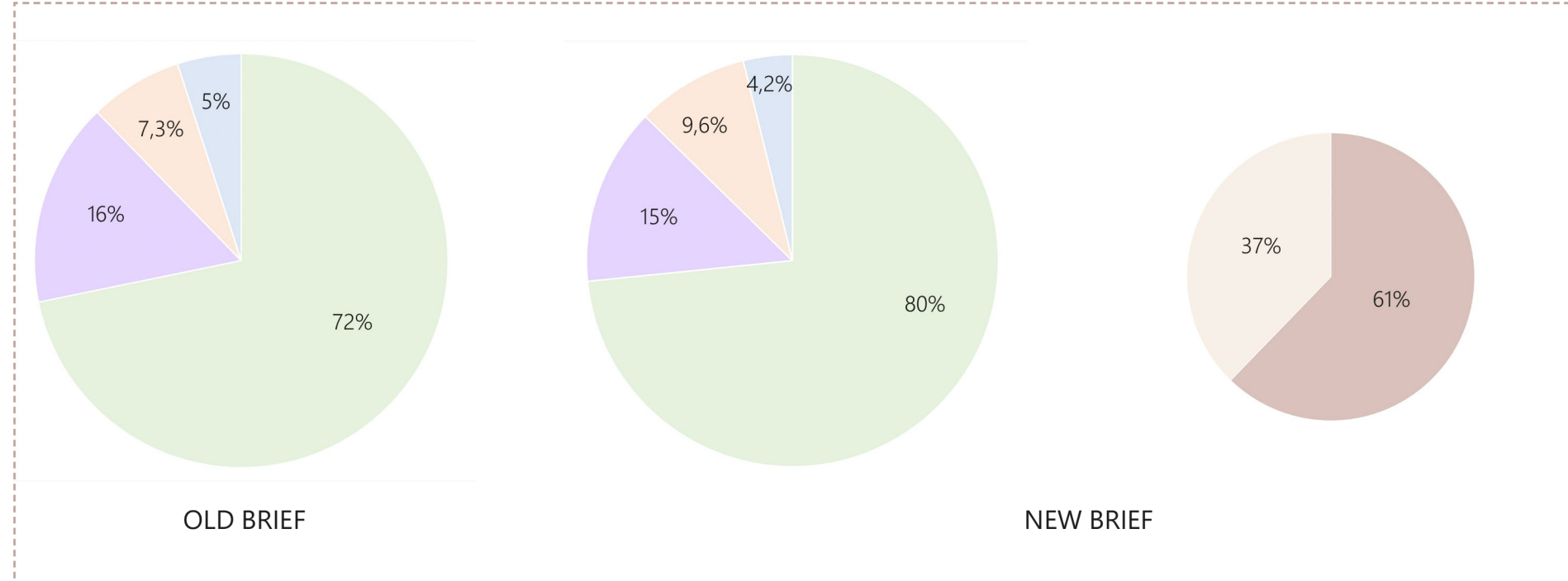
Adding facade frames to create texture to distinguish the new and old building and fit into the site context and typology.

MASTER PLAN



BRIEF

OVERALL PROGRAM



HEALTHCARE CENTER 1497,5 m ²		HEALTHCARE CENTER 1133,3 m ²		BIRGITTA BUILDING 380 m ²	
PRIMARY CARE	1079,5 m ²	PRIMARY CARE	912,7 m ²	CAFÉ	140 m ²
PUBLIC DENTAL CARE	240 m ²	PUBLIC DENTAL CARE	172,6 m ²	PHARMACY	240 m ²
COMMON SPACES	109 m ²	COMMON SPACES	109 m ²		
FAMILY CARE	69 m ²	FAMILY CARE	48 m ²		

From the original brief, which was also a traditional primary care center, we made some adjustments to the functional area.

First of all, considering the impact of the epidemic on us, we needed the healthcare center to be flexible enough to switch freely between normal and emergency modes. We unified the modalities of all the exam rooms so that they can switch functions with each other if necessary.

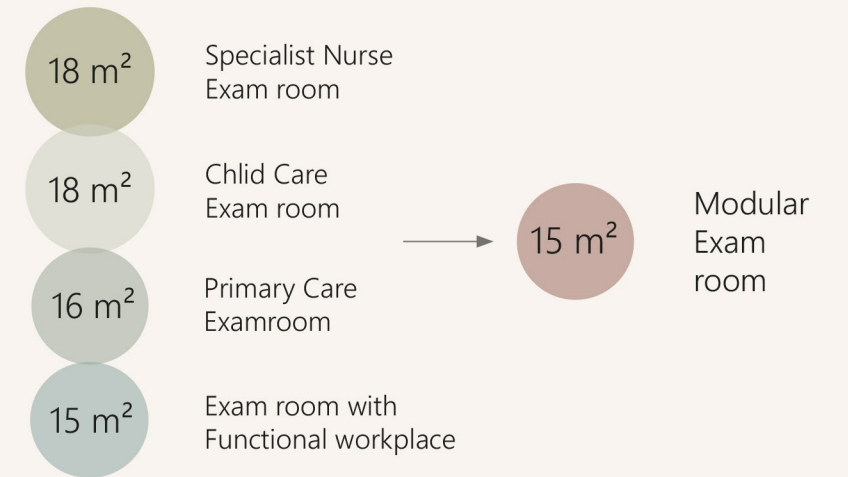
On the other hand, considering that we kept the original building as much as possible, we also thought about the possibility of reusing the old building. We made the old building as a coffee bar and a pharmacy, making it a transition between the healthcare center and the public square.

→ MORE PUBLIC SPACE

→ MORE FLEXIBLE EXAM ROOM

→ MORE CONNECTION WITH BIRGITTA SQUARE

MODULAR SIZE



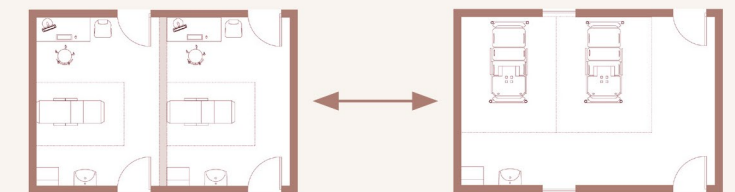
FLEXIBLE MODULE

We have also considered the possibility of switching the functions of the exam room and meeting room respectively.

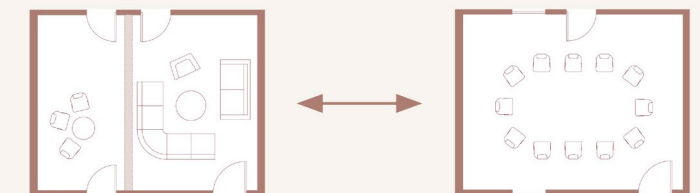
For example, a normal exam room can be combined into a complete patient room if necessary; small and independent psychosocial consultation rooms can be combined into a large meeting room for patients to communicate in groups.

All these are based on a "wall" that can be folded.

EXAMINATION ROOM



PSYCHOSOCIAL CARE



PROGRAM - AN OVERVIEW

FLOOR PLANS IN AXONOMETRIC VIEW

The program is divided into 2 floors in 2 volumes.

VISITORS

Patients will enter the main entrance which is the closest to the parking lot, know where the exam rooms are located at the public reception and have direct access to the second floor through a large staircase. They will use a very open and transparent corridor with a very clear and visible flow. They can also enjoy the sun in the atrium while waiting for services.

EMERGENCY

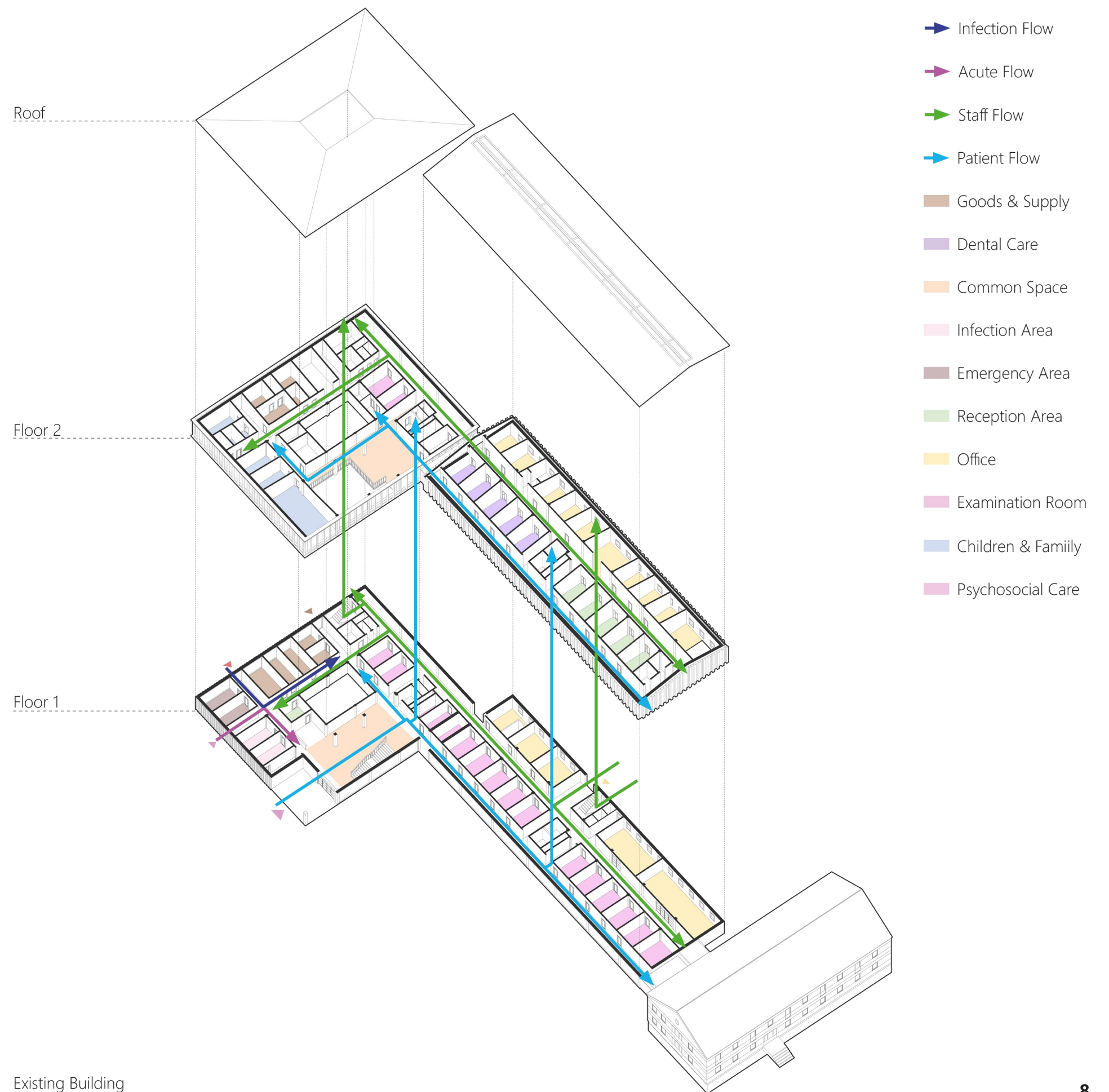
The emergency entrance is located on the east side of the building near the road, where ambulances can avoid conflicts with the flow of private cars and trucks. The emergency rooms will be accessed through a separate entrance and the staff corridor, but they are adjacent to the other general exam rooms, so it will be easy to transfer patients between the emergency and general exam rooms.

STAFF

Staff will enter a separate entrance on the south side, which is quiet and rarely walked through. They can go directly into the locker room to change and use a separate staffs corridor to reach any of the offices or consultation rooms on the south side. This corridor is lit by a long skylight, so the work area is well lit and ventilated.

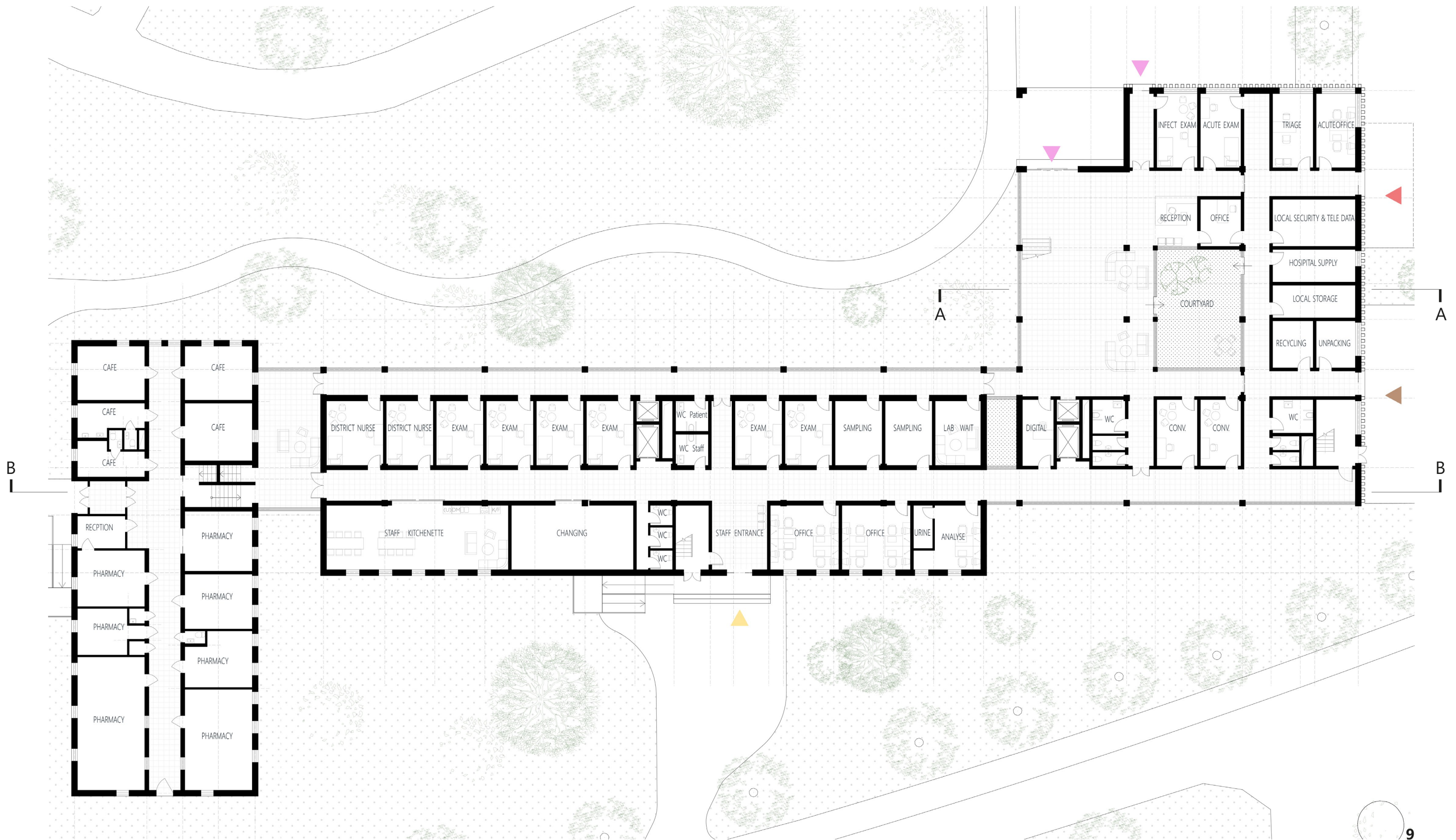
GOODS

Goods will be delivered on the east side adjacent to the road side where they will be unpacked and stored, and there are storage rooms on both the first and second floors where goods can be distributed. Different floors of the units can get their supplies on the corresponding floor, which can improve the efficiency of accessing supplies



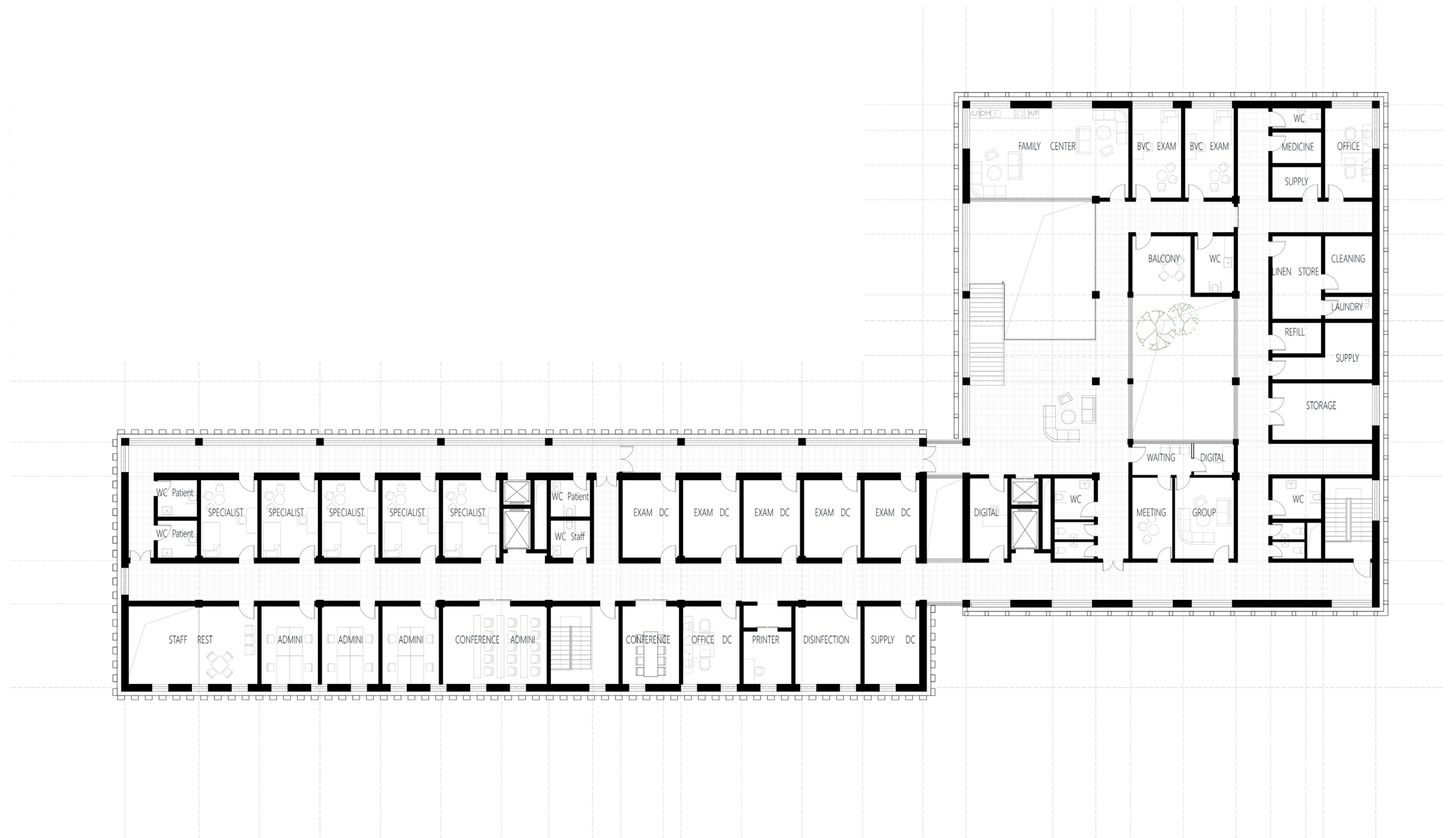
FLOOR PLAN

PLAN 1F 1:200



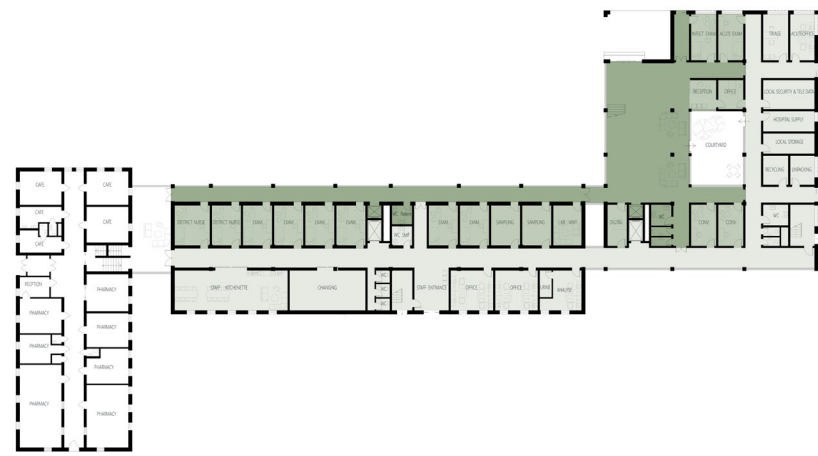
FLOOR PLAN

PLAN 2F 1:200

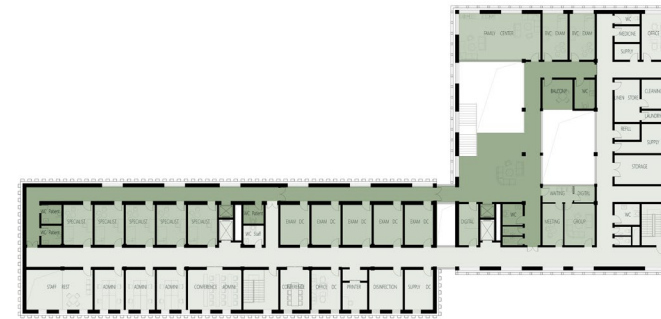


FLOOR PLAN

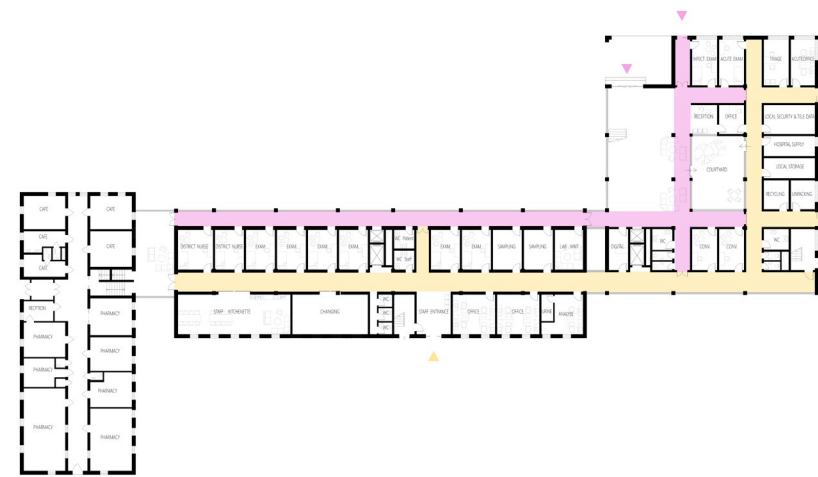
PLAN ANALYSIS



- Patient Area
- Mixed Area
- Staff Area



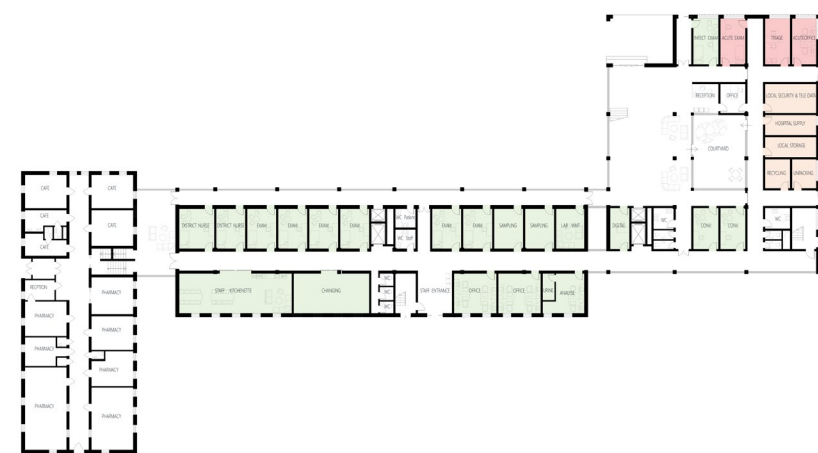
- Patient Area
- Mixed Area
- Staff Area



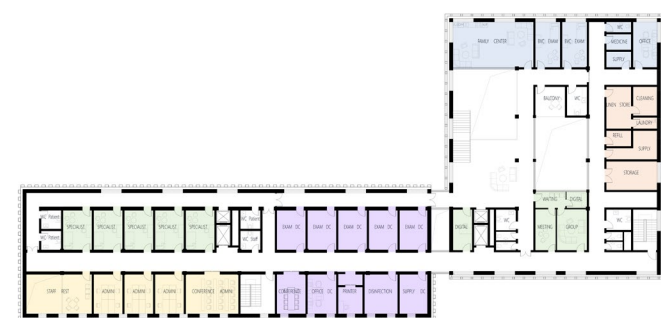
- Patient Corridor
- Staff Corridor



- Patient Corridor
- Staff Corridor



- Acute & Infection
- Supply
- Primary Care



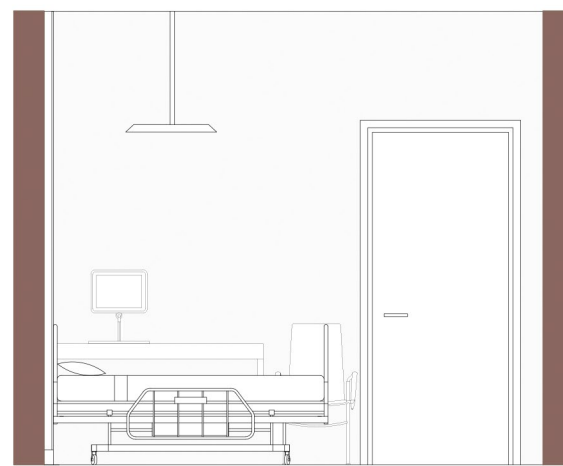
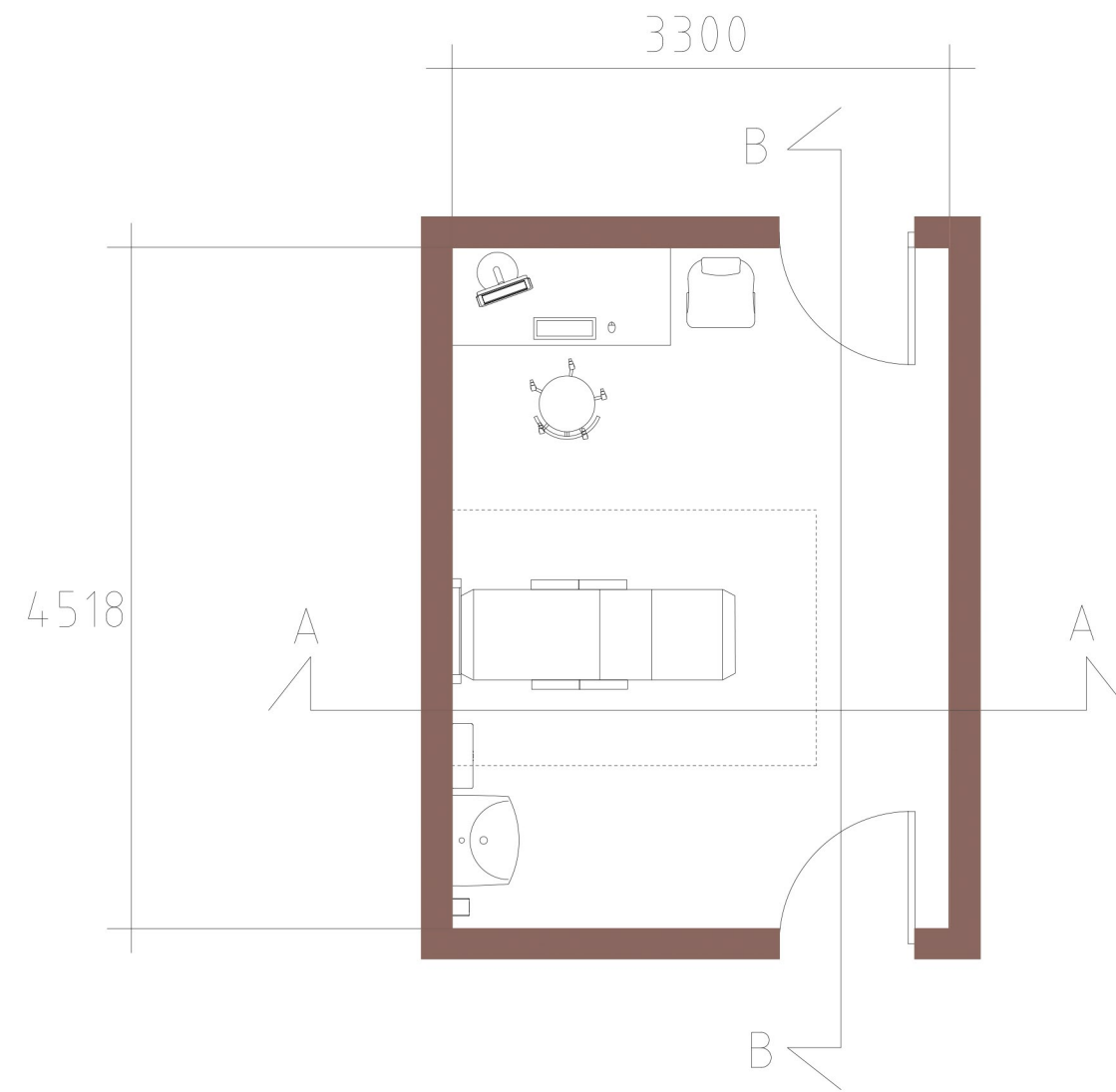
- Family & Children
- Storage
- Dental Care
- Administration
- Psychosocial Care

EXAMINATION ROOM

Every examination room is accessed through two separate doors on each side for staff and patients.

Doors on the patient's corridor side are made of frosted glass which protects patients from insight but lets in daylight from the corridor into the examination room.

In this type of rooms the focus is on dividing the space to ease the patient and give them the opportunity to have a face to face conversation with the healthcare workers about their condition.



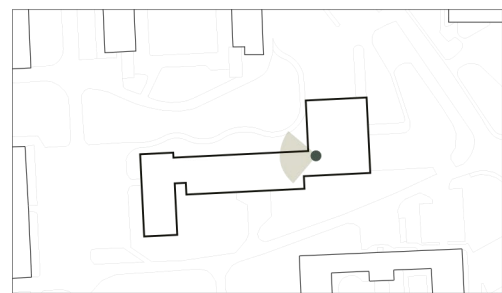
A-A



B-B

INTERIOR PERSPECTIVE

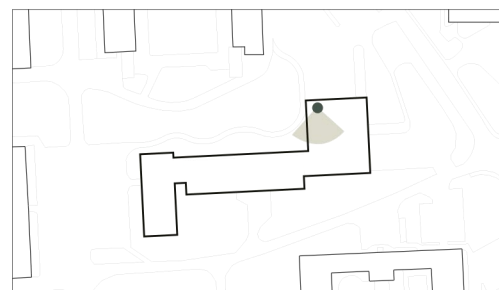
PATIENT CORRIDOR



This perspective shows the patients corridor.

INTERIOR PERSPECTIVE

ENTRANCE HALL

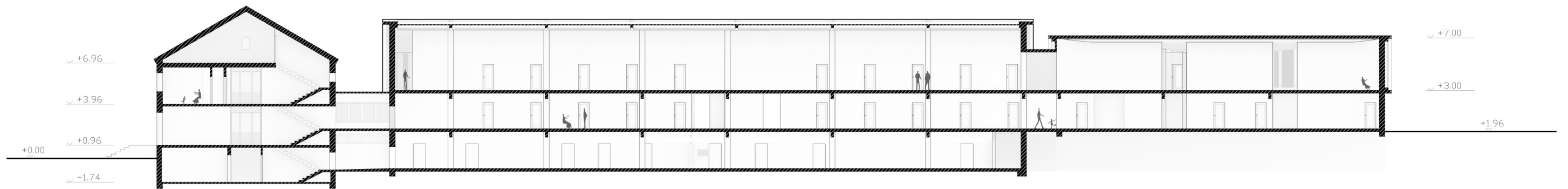


This perspective shows the main entrance space.

FACADE & FACADE SECTION



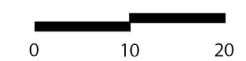
A-A Section & Elevation 1:300



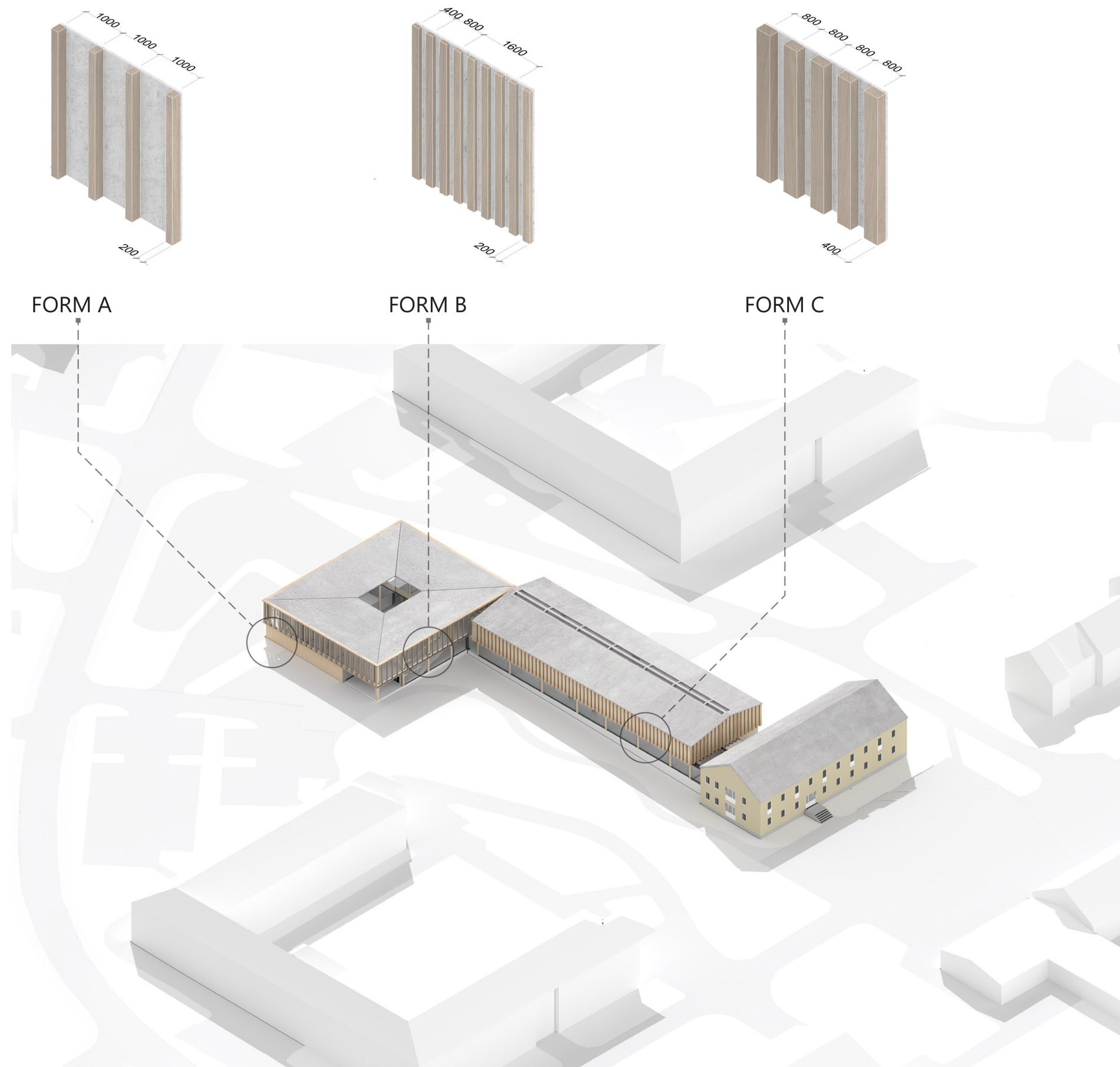
B-B Section 1:300



Elevation 1:300



FACADE LOGIC & MATERIALS



FACADE DESCRIPTION

EXPRESSIONS

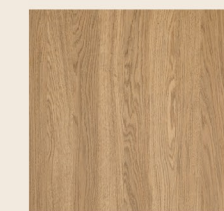
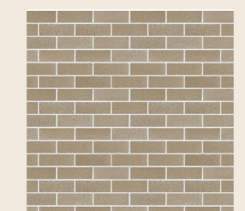
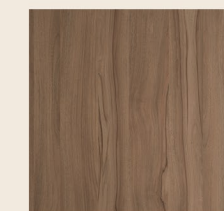
We aimed to add a new volume on the preserved building, which means that we needed to bring a fresh touch to the site while keeping the proportions of the openings and materials of the old building in harmony. We wanted to create a feeling that was light and articulated with the heavy brick wall, while expressing the contrast between light and heavy, so we chose flexible materials of wood and glass.

MATERIALS

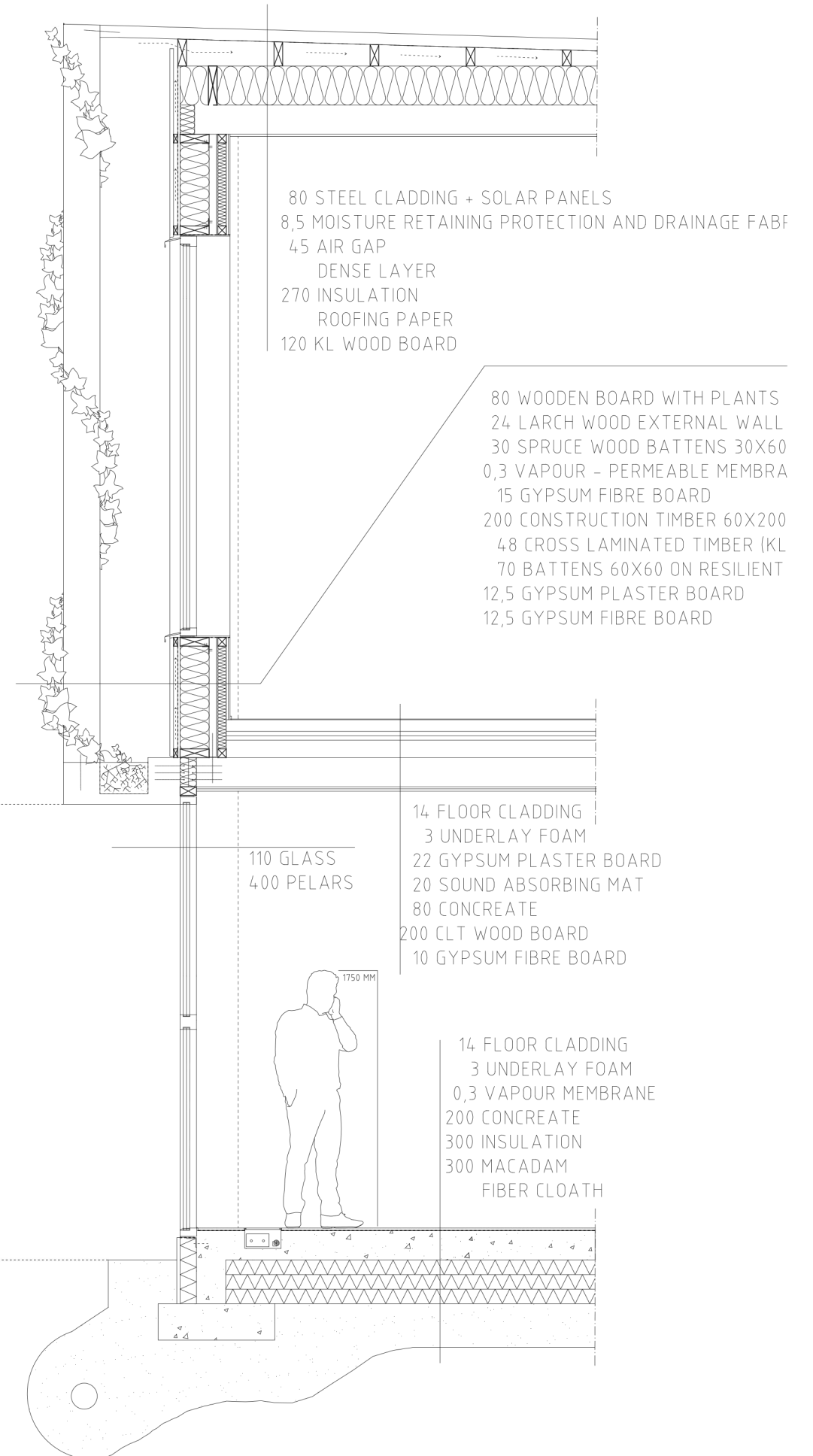
The wood and glass façade can well express the contrast between light and heavy, virtual and real. In addition, we believe that as the spacing and size of the wood grille changes, the emotion expressed will also change, and the combination of using different modulus of grille to achieve the coordination of the façade is our main technique.



1. Lime cladding
2. Oak
3. Pine
4. Brick
5. Solar tiles

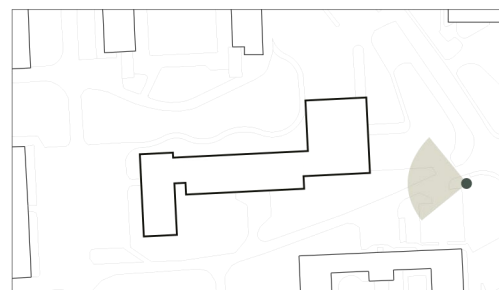


DETAILED SECTION



PERSPECTIVE

BACKSIDE OF BUILDING



This perspective shows the backside with goods, emergency and staff entrances.