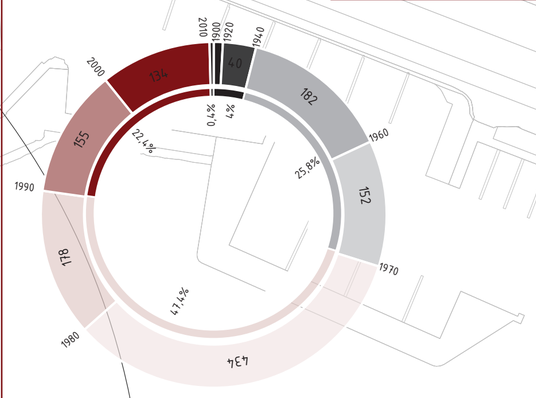
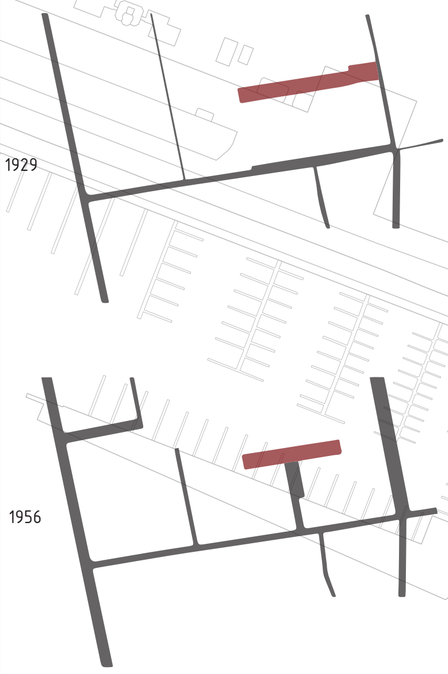
PROPERTIES IN PINEDO OVER TIME

- Private Green Areas
- Public Green Areas
- Buildings > 80 Years
- Buildings > 50 Years
- Buildings > 20 Years

ROADS EVOLUTION





Approximately 63.6% of the buildings were built before 1980, while only 36.4% are built after that date. Of the 1297 dwellings built in Pinedo, only 140 are built after the year 200. This means that most of these residential dwellings are probably in need of renovation to ensure the quality and standards of habitability in force today.

One of the ideas behind the project is precisely the reuse of existing spaces and buildings, instead of demolishing to build a new, to take advantage of and improve existing buildings. This means both an economic saving and a benefit for the environment, since, among other things, there is less consumption of raw materials, less waste generation and therefore a more sustainable construction.

Pinedo is ordered from the two original streets that have been maintained over the years, creating an axis in what would be the equivalent of the centre, it can be determined that you can walk everywhere, as it is a town that can be crossed from end to end in less than ten minutes. Pinedo is ordered from the two original streets that have been maintained over the years, creating an axis in what would be the equivalent of the centre, it can be determined that you can walk everywhere, as it is a town that can be crossed from end to end in less than ten minutes.

The growth of the town and the construction of new houses over the years has meant that the streets that make up Pinedo have evolved and adapted to the new needs of society. In 1929 Pinedo was made up of two main streets that formed an axis, one was the main road that communicated with Valencia and the other was the Camino al Mar. It was around these two streets that the first dwellings were built, generally one or two-storey detached houses.

The greatest change took place from 1956 onwards, when a locality quite similar to what is known today can already be seen. In this case, during these years the single-family houses gave way to residential buildings of up to six floors. This is when more streets appeared and the central blocks of Pinedo began to be delimited. As for the emblematic building, it can be seen that it no longer maintains all its original size, but it is still practically intact.

It is from the year 2002 when Pinedo definitively takes on the shape it has today, the three blocks in the centre are closed off and are formed by the tallest residential buildings, surrounded by the first constructions which were the single-family houses.

Unfortunately, half of the landmark building has disappeared. Currently, this building is out of planning, invading the street, although when analysing the evolution of the streets, it is shown that it is these same streets which have invaded the building. Preventing the total diappearance of this building is one of the main goals of the project as it is an emblematic building for the area.

JANUARY

The water remaining is drained from the fields to prepare the soil.

MARCH

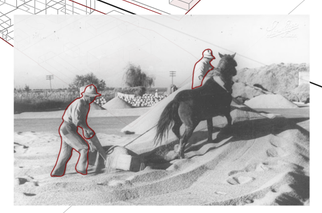
The soil rests in the sun and then the top layer is turned over. Birds are very important during this process.

MAY_JUNE_JULY

Water is drained from the field to combat algae. The stalk of the seeded rice has usually grown about 30 or 40 centimeters, so it is time to pull it up and transport it to the fields, placing the bundles of 3 or 5 rice stalks in a straight line, always walking backwards so as not to step on them.

SEPTEMBER

Harvesting must take place very quickly to avoid the rains of the season. The spikes are moved to the drying area by cart or tractor.



NOVEMBER

The last step is to mill the rice, separating the husk from the grain.

DECEMBER

The rice is packed into the sacks for distribution.

FEBRUARY

The fields are plowed, the remaining rice straw rots and is mixed with the mud, This produces a very good quality fertilizer.

APRIL

During this period of time seeding takes place. The stagnant water in the fields heats up. Natural fertilizers are also used to prevent pests.

AUGUST

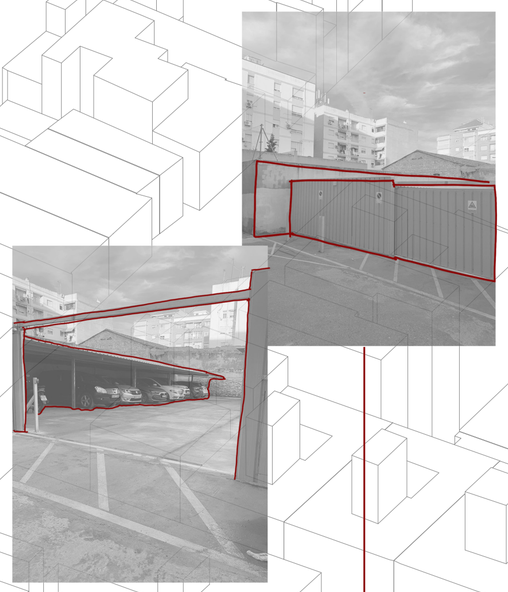
Rice stalks begin to dry.

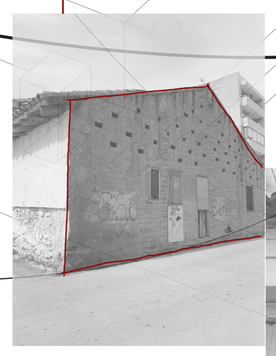
OCTOBER

The grain is separated from the spike in a process called threshing.

RICE AND BEER LAB__URBAN_APPROACH_1.5000_1.1500

Aida Martín Sendra_TFM





FAÇADE STUDY

PARTY WALLS

The existing party walls offer the interior of the block the opportunity to build without occupying the space of the neighbours, allowing the addition of a building with a similar height of the pre existent buildings.

REAR FAÇADES

In the adjoining buildings there are two types of rooms facing the interior of the block, the living rooms or dining rooms and the bedrooms.
An empty space should remain between these façades and the invervention to avoid obstructing views or being to close to the building.

FAÇADE REHABILITATION

These are two existing façades that belong to the old warehouse that is one of the most important parts of the project. These façades will be refubrished so that the main atmosphere of the place remains. Some elements like windows, or doors will be replaced in order to ensure the necessary conditions of comfort for users.

FAÇADE REPLACEMENT

The other façades of the warehouse lack of interest, so one will be replaced by a concrete lattice wall that simulates the way rice sacks were stacked in the past. The other one is going to be changed to a glass wall to make the place lighter.

The heights defining the buildings, after having carried out the study of the façades, it is determined that two of the new volumes will have a total height of fourteen metres above ground level, one of them will also have a basement at a height of minus three metres and the only building with a different height will be five metres.

The aim is for the volumes to be perceived as light steel and glass elements on the ground floor, so that everything functions as a unit open to the public, while the upper floors are given a more closed and protected appearance, using a skin that gives the buildings their character by showing or hiding the different activities that take place inside through full and empty spaces. The building tells the story of its activity through the materials.

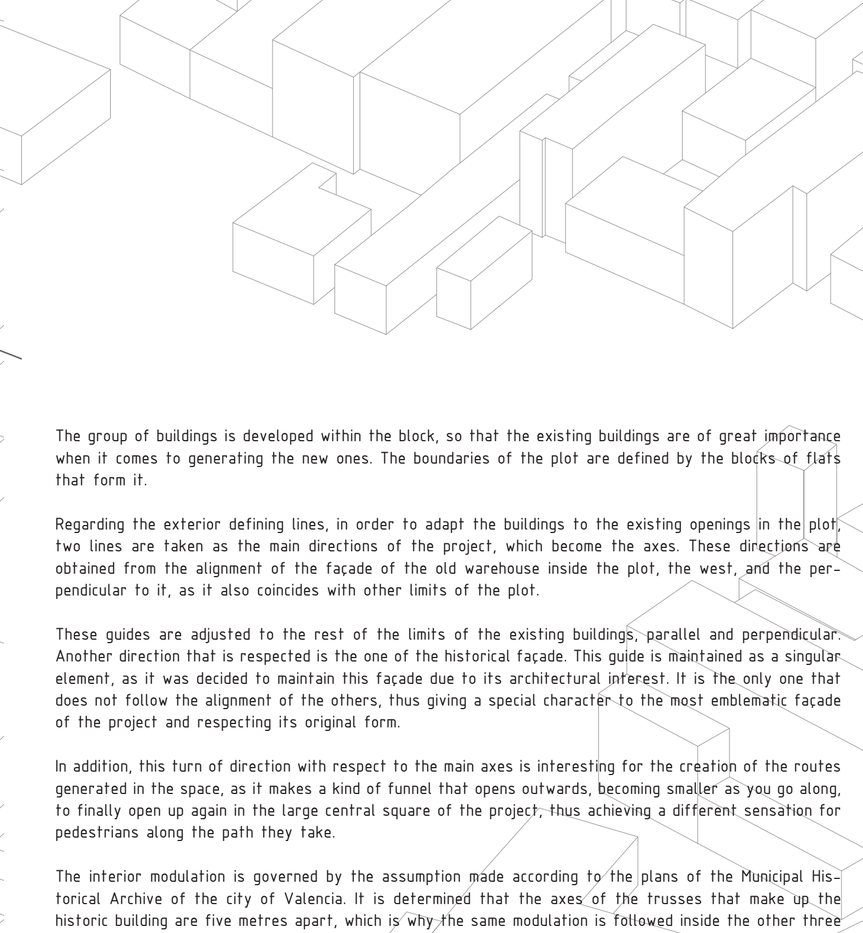
The group of buildings is developed within the block, so that the existing buildings are of great importance when it comes to generating the new ones. The boundaries of the plot are defined by the blocks of flats that form it.

Regarding the exterior defining lines, in order to adapt the buildings to the existing openings in the plot, two lines are taken as the main directions of the project, which become the axes. These directions are obtained from the alignment of the façade of the old warehouse inside the plot, the west, and the perpendicular to it, as it also coincides with other limits of the plot.

These guides are adjusted to the rest of the limits of the existing buildings, parallel and perpendicular. Another direction that is respected is the one of the historical façade. This guide is maintained as a singular element, as it was decided to maintain this façade due to its architectural interest. It is the only one that does not follow the alignment of the others, thus giving a special character to the most emblematic façade of the project and respecting its original form.

In addition, this turn of direction with respect to the main axes is interesting for the creation of the routes generated in the space, as it makes a kind of funnel that opens outwards, becoming smaller as you go along, to finally open up again in the large central square of the project, thus achieving a different sensation for pedestrians along the path they take.

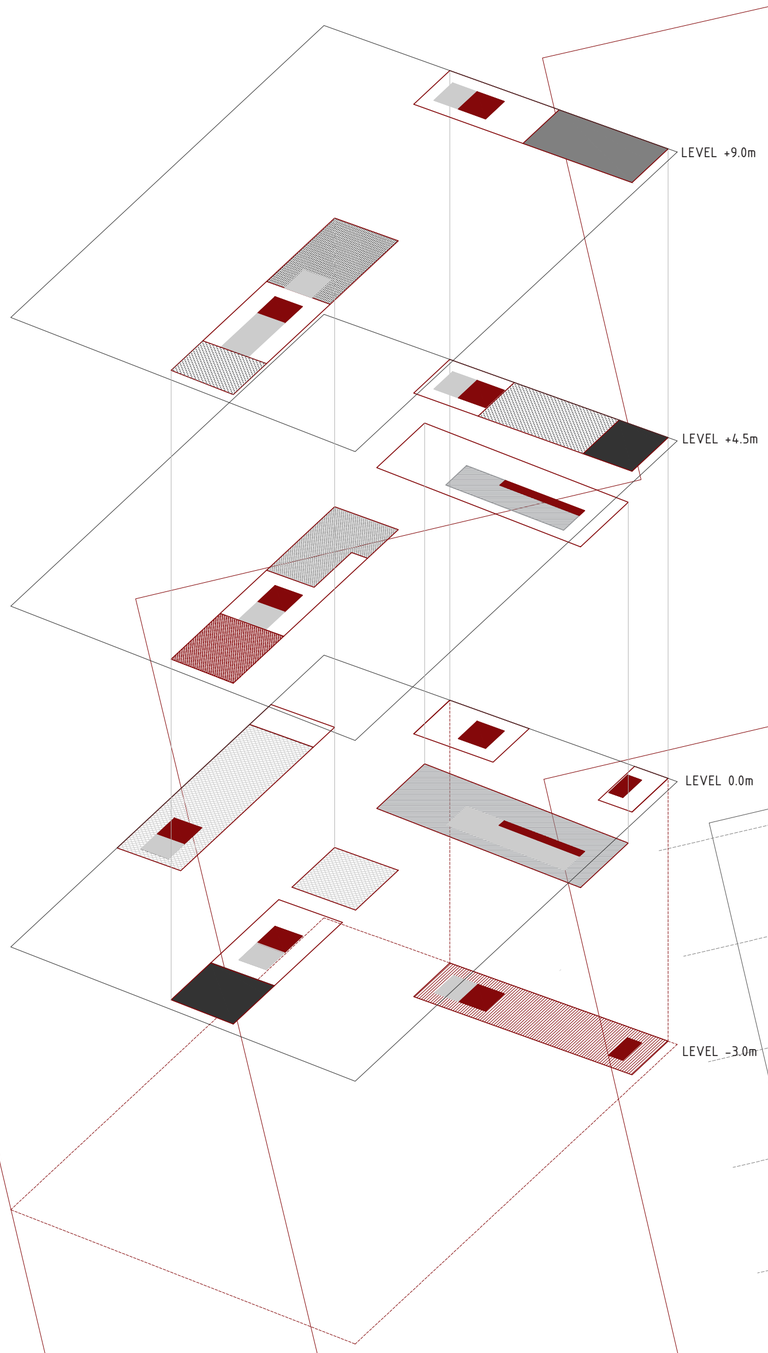
The interior modulation is governed by the assumption made according to the plans of the Municipal Historical Archive of the city of Valencia. It is determined that the axes of the trusses that make up the historic building are five metres apart, which is why the same modulation is followed inside the other three buildings, serving as the axis of the pillars and trusses.



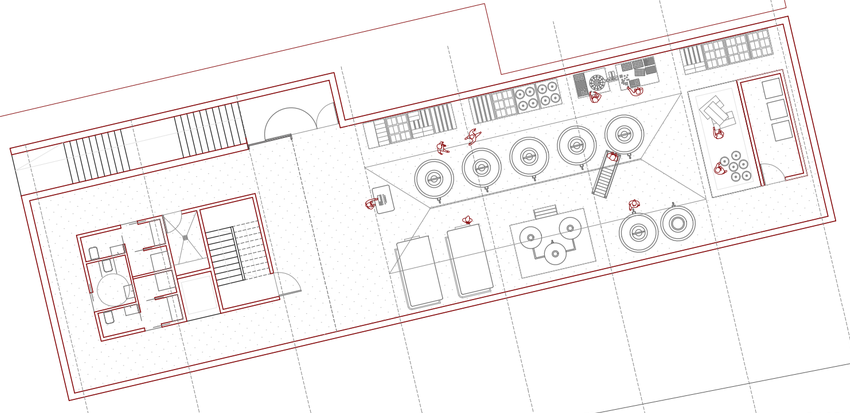
Societies evolve, times change and, in the end, everything flows and nothing remains, this also happens with architecture, that is why one of the main ideas is the generation of buildings that act as containers that can host different uses according to the needs of society. Just as the old rice warehouse will have a more profitable use today, it is very interesting to generate volumes that can adapt to the passing of time, because in this way they will not fall into abandonment when the use to which they are currently destined changes. For this reason, each of the buildings has a communication core that contains some of the basic services that all the buildings need, being a box within a box.

RICE AND BEER LAB__BUILDING DEFINITION_1.300

Aida Martín Sendra_TFM



FACTORY
WET AREAS
COMMUNICATIONS CORE
BAR
EXHIBITION AREA
HALL/CORRIDOR
CANTEEN AND REST AREA
CLASSROOMS
GROUP WORK AREA
OFFICE AREA
LABORATORIES
CONFERENCE ROOM



BF	BASEMENT FLOOR BUILDING 1	USABLE m²
BF01	Staff changing room	8,46
BF02	Toilets	8,53
BF03	Factory	138,90
BF04	Storage	40,65
BF05	Waste room	9,00
BF06	Freight lift	11,20
BF07	Circulations	71,18
BF08	Facilities room	4,50
TOTAL m²		292,42

TRAILS AND ACCESSES

The use of this site offers a wealth of opportunities. Reusing the interstitial space, opening up the complex and giving it to the population is one of the main motivations behind the realisation of this project. The objectives outlined above are achieved through the architecture presented and the reclamation of the space.

Firstly, one of the strategies followed to open up the interior of the block is to allow access to it through three of the four streets that make it up. These accesses currently exist, but instead of being open and inviting people to enter, they are architectural barriers, fences or walls.

Each access has a main purpose, although all of them can be used by different people. Firstly, the access located on the northernmost street would be a kind of secondary access, its function is more relegated to the use of neighbours wishing to access their ground floors.

Secondly, there is the main access, which is located in the easternmost part of the plot. This access is designed to be used more frequently by both visitors and residents. This is due to the fact that it is the access that shares the route with the old rice warehouse, being one of the most charming accesses.

Finally, the third access is designed to be used mainly by the employees of the complex, although, like all of them, it can be used by any passer-by. This is because it mainly serves one of the buildings with a more private programme.

As for the interior accesses to the buildings, most of them are from the interior of the block's square. There is also an access to the old building from the outside to attract people passing by on the street, as well as for unloading goods.

PROGRAM

The idea of the program is the recovery of the block and the coexistence of uses. An area that opens up to society, a space in which new uses are generated that cohabit with society, in short, a set of spaces that are ceded to the population. Two different but complementary actions are proposed for this. On the one hand, the addition of three new buildings is proposed to host the different uses that will generate, on the other hand, the rehabilitation of the old rice warehouse, turning it into a place where neighbours can go to have fun, hang out with their friends or simply breaking with the routine.

Traditionally, in cities, spaces cohabited despite having different land uses, for example, in the widening of Valencia one can see how the ground floors of buildings develope commercial activities or other facilities while the upper floors of these buildings are used as residences. Something like this is to be achieved with the incorporation of the new blocks into the interior of the block. A reciprocal relationship between the new buildings and their uses and the residential blocks.

The program is in charge of promoting the reactivation of the economy, generating a large number of jobs, being able to employ people dedicated to different sectors, for example: service assistants, catering, research, design, students, administration, reception, guides, commercial, logistics, cleaning and gardening, these being just some of the jobs generated directly.

Therefore, it can be considered that each building has its own character: the first is commercial and productive, the second is for exhibitions, the third is for educational purpose and, finally, the fourth is for leisure. The common point is the square, which is the area where they all converge and interact, converting this individuality into a whole that is better understood and complemented by functioning as a grouping.

In short, the programme reactivates the economy, creates jobs and encourages the use of local products.

RICE AND BEER LAB__BUILDING DEFINITION_1.200
Aida Martín Sendra_TFM

A-A' ELEVATION

1GF	GROUND FLOOR BUILDING 1	USABLE m²
1GF01	Hall	56,00
1GF02	Circulations	49,40
1GF03	Facilities room	4,50
1GF04	Unloading area	14,80
1GF05	Storage	28,60
1GF06	Freight lift	11,20
	TOTAL m²	164,50

2GF	GROUND FLOOR BUILDING 2	USABLE m²
2GF01	Hall	56,00
2GF02	Exhibition area	308,00
2GF03	Storage	10,37
2GF04	Facilities room	7,00
2GF05	Toilets	16,00
	TOTAL m²	397,37

3GF	GROUND FLOOR BUILDING 3	USABLE m²
3GF01	Hall	56,00
3GF02	Circulations	82,86
3GF03	Facilities room	4,50
3GF04	Audiovisual room	112,50
3GF05	Toilets	18,90
3GF06	Staff rest room	107,50
	TOTAL m²	382,26

4GF	GROUND FLOOR BUILDING 4	USABLE m²
4GF01	Service area	185,45
4GF02	Bar counter	128,90
4GF03	Hall	27,30
4GF04	Toilets	22,58
4GF05	Staff toilets	8,80
4GF06	Staff changing room	8,60
4GF07	Storage	4,60
4GF08	Kitchen	32,00
4GF09	Terrace	116,00
	TOTAL m²	534,23

LEVEL 0m

RICE AND BEER LAB__BUILDING DEFINITION_1.200

Aida Martín Sendra_TFM

B-B' ELEVATION

1FF	FIRST FLOOR BUILDING 1	USABLE m²
1FF01	Toilets	19,70
1FF02	Circulations	78,80
1FF03	Facilities room	4,50
1FF04	Office area	138,45
1FF05	Private office	23,10
1FF06	Staff rest room	81,19
	TOTAL m²	345,74

3FF	FIRST FLOOR BUILDING 3	USABLE m²
3FF01	Classroom 1	81,30
3FF02	Classroom 2	76,03
3FF03	Facilities room	4,50
3FF04	Group study area	137,19
3FF05	Toilets	18,90
3FF06	Circulations	109,30
	TOTAL m²	427,22

4FF	FIRST FLOOR BUILDING 4	USABLE m²
4FF01	Play area	32,89
4FF02	Auxiliary bar counter	8,00
4FF03	Service area	38,91
	TOTAL m²	79,80

LEVEL 4.5m

RICE AND BEER LAB__BUILDING DEFINITION_1.200

Aida Martín Sendra_TFM

C-C' ELEVATION

1SF	SECOND FLOOR BUILDING 1	USABLE m²
1SF01	Toilets	19,70
1SF02	Circulations	64,80
1SF03	Facilities room	4,50
1SF04	Events area	76,20
1SF05	Auditorium	168,90
1SF06	Technical control area	11,80
	TOTAL m²	345,90

3SF	SECOND FLOOR BUILDING 3	USABLE m²
3SF01	Laboratory	163,25
3SF02	Storage	20,53
3SF03	Facilities room	4,50
3SF04	Circulations	114,40
3SF05	Toilets	18,90
3SF06	Staff changing room	19,70
3SF07	Office area	84,30
	TOTAL m²	425,58

LEVEL 9m

RICE AND BEER LAB__ BUILDING DEFINITION_1.200
Aida Martín Sendra_TFM

D-D' ELEVATION

Both the brewery and the craft rice beer brewery are presented as one of the main engines that will reactivate the urban block and Pinedo.

Beer is one of the first fermented beverages consumed by people and there is a great variety of beers depending on the cereal used to make it, as well as the temperature and amount of fermentation used. The main characteristic of the beer brewed in Pinedo is that the grain used is rice. This type of beer is already a reality and exists today, being a good alternative for people with celiac intolerance, which can also be enjoyed by people without digestive diseases.

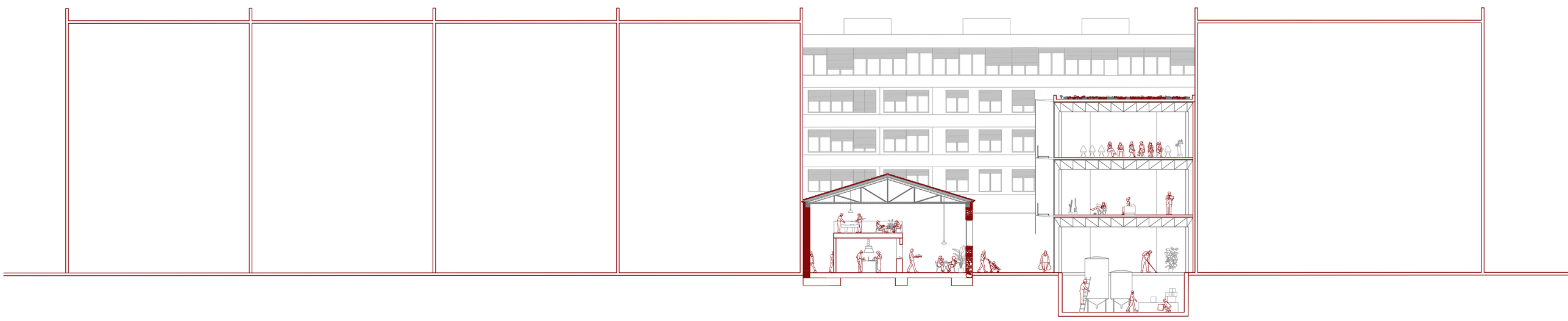
The process that must be followed for the elaboration of beer is a meticulous work that consists of a series of steps, starting with the design of the recipes, a task that is carried out by the master brewers, the laboratories allow the realization of tests where new recipes are developed. The next step is milling and mashing, when the grain is milled and mixed with water, later the maltose, the part of the starch that has been converted into fermentable sugar, can be extracted. The wort, which is the liquid part, is then filtered out of the malt, which is the solid part.

Then the wort is boiled, a process in which the wort is sterilised by boiling. Once boiled, it is centrifuged, a process in which a cleaner wort is obtained, as a sediment is generated with the unwanted particles.

This process is carried out in two different ways depending on whether you want to obtain a lager or ale beer, but it generally takes place in horizontal tanks in which the beer is subjected to low temperatures. Finally, the beer is bottled, stored and distributed.

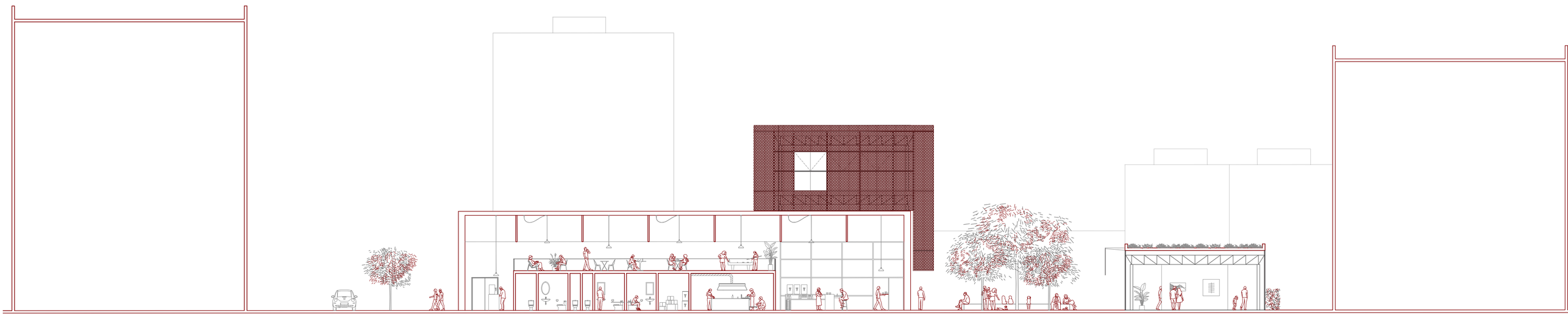
The facilities are designed to produce not just one type of beer, but up to six, and the brew masters are responsible for the design and testing in the laboratories for the creation of new beverages.

E-E' ELEVATION



1-1' SECTION

2-2' SECTION



3-3' SECTION

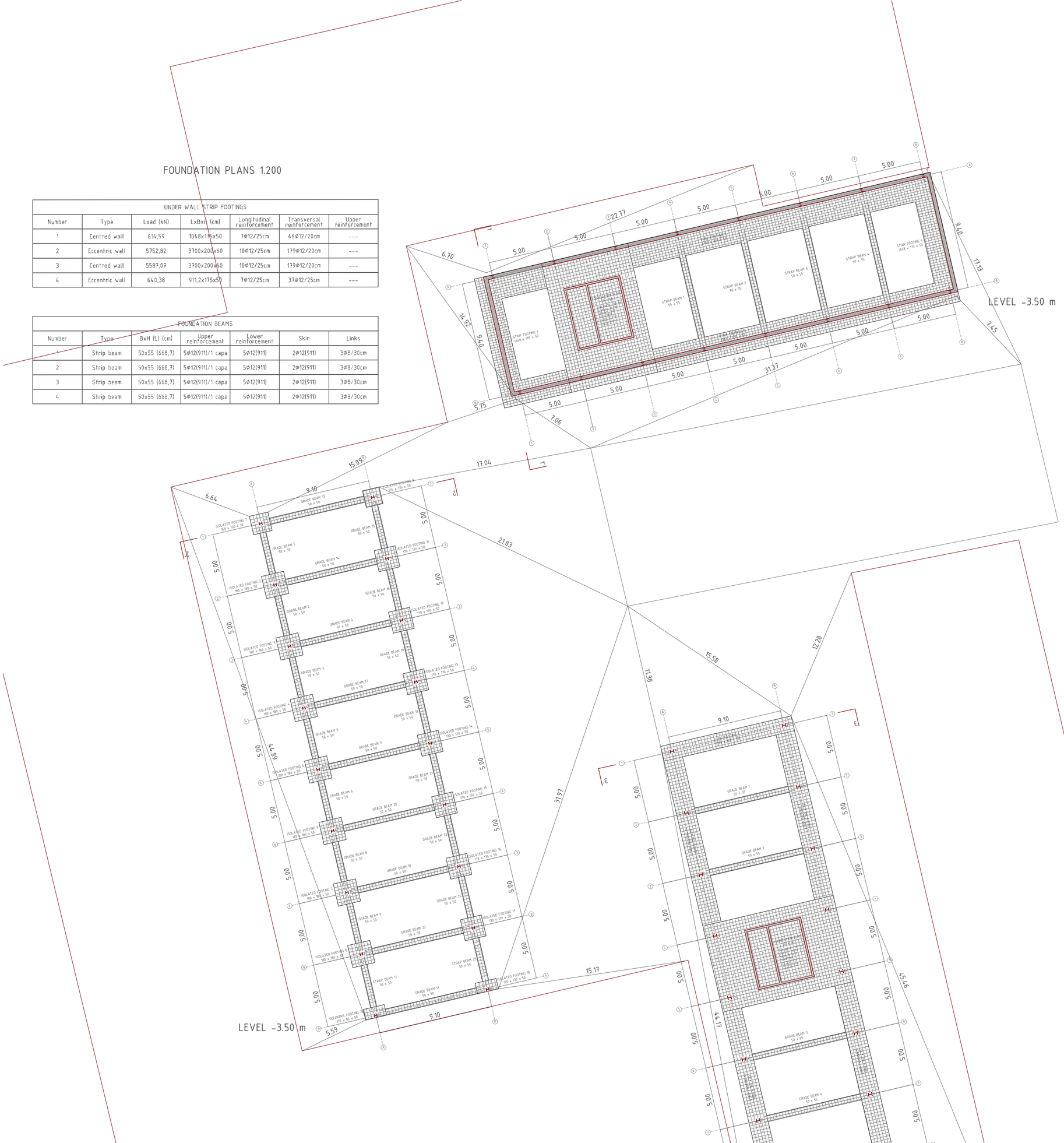
RICE AND BEER LAB__BUILDING DEFINITION_1.200

Aida Martín Sendra_TFM

FOUNDATION PLANS 1.200

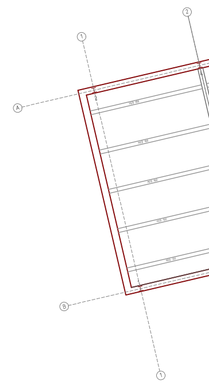
UNDER WALL STRIP FOOTINGS						
Number	Type	Load (kN)	LxBxH (cm)	Longitudinal reinforcement	Transversal reinforcement	Upper reinforcement
1	Centred wall	614,59	1048x175x50	7Ø12/25cm	46Ø12/20cm	---
2	Eccentric wall	5752,82	3700x200x60	10Ø12/25cm	179Ø12/20cm	---
3	Centred wall	5587,07	3700x200x60	10Ø12/25cm	179Ø12/20cm	---
4	Eccentric wall	640,38	911,2x175x50	7Ø12/25cm	37Ø12/25cm	---

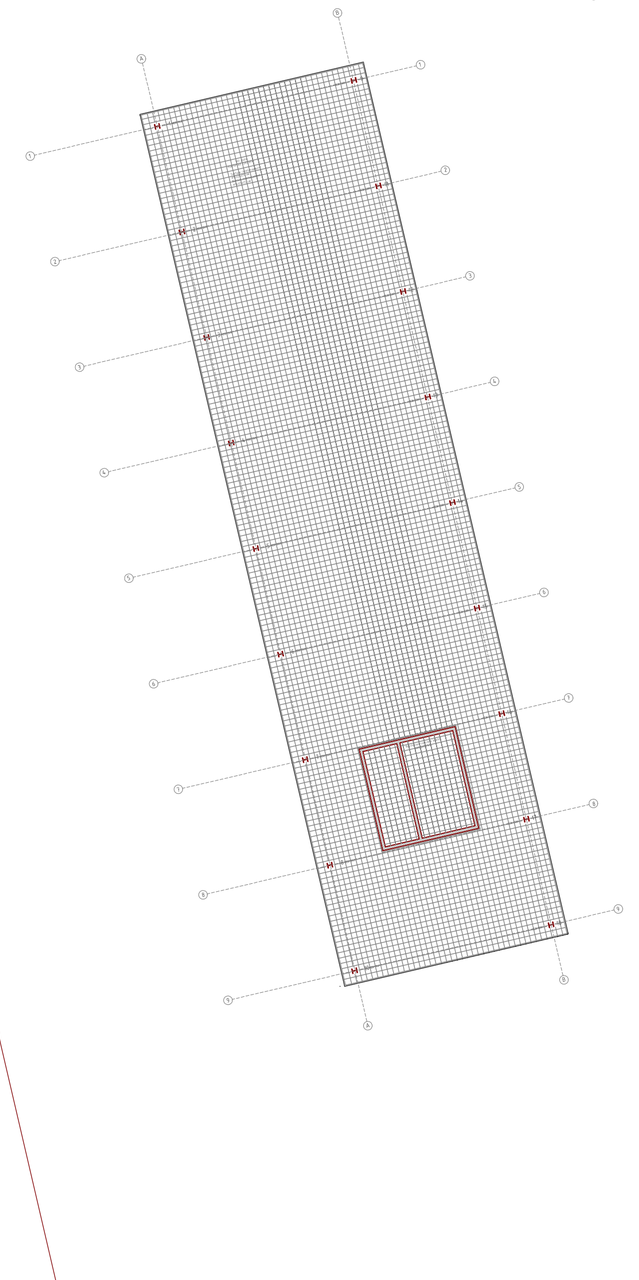
FOUNDATION BEAMS						
Number	Type	BxH (L) (cm)	Upper reinforcement	Lower reinforcement	Skin	Links
1	Strip beam	50x55 (668,7)	5Ø12(911)/1 capa	5Ø12(911)	2Ø12(911)	3Ø8/30cm
2	Strip beam	50x55 (668,7)	5Ø12(911)/1 capa	5Ø12(911)	2Ø12(911)	3Ø8/30cm
3	Strip beam	50x55 (668,7)	5Ø12(911)/1 capa	5Ø12(911)	2Ø12(911)	3Ø8/30cm
4	Strip beam	50x55 (668,7)	5Ø12(911)/1 capa	5Ø12(911)	2Ø12(911)	3Ø8/30cm



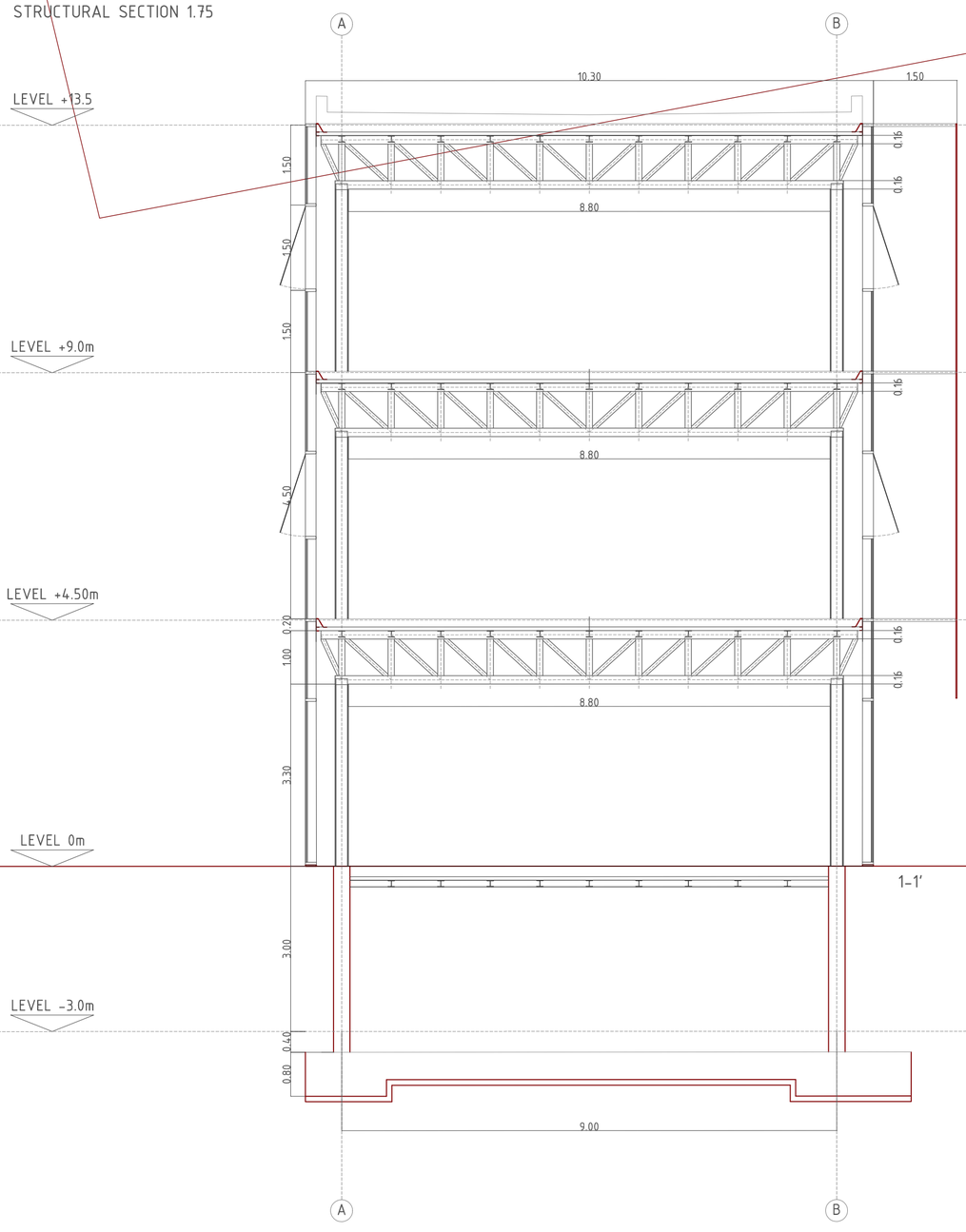
STRUCTURAL PLANS 1.200
LEVEL 0.00 m

SLABS
FOUNDATION SLAB 50 x 50 Slab depth - 500 mm Coating - 50 mm Concrete HA30 Steel B500 Surface reinforcement Ø16/30x30 cm Bottom reinforcement Ø16/30x30 cm





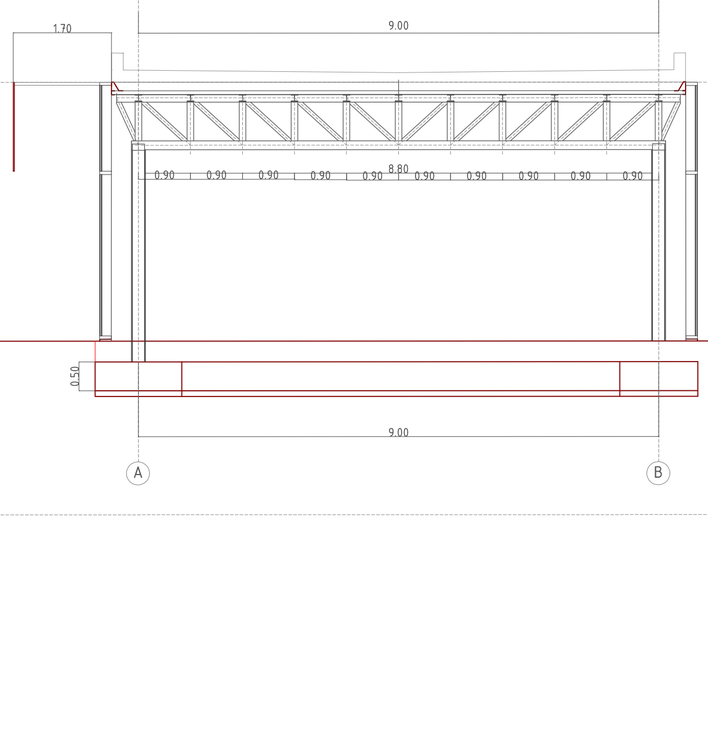
STRUCTURAL SECTION 1.75



PILLARS BUILDING 1			
	Storey 1	Storey 2	Storey 3
End pillars	HEB 200	HEB 180	HEB 160
Central pillars	HEB 220	HEB 220	HEB 200

PILLARS BUILDING 2	
End pillars	HEB 200
Central pillars	HEB 220

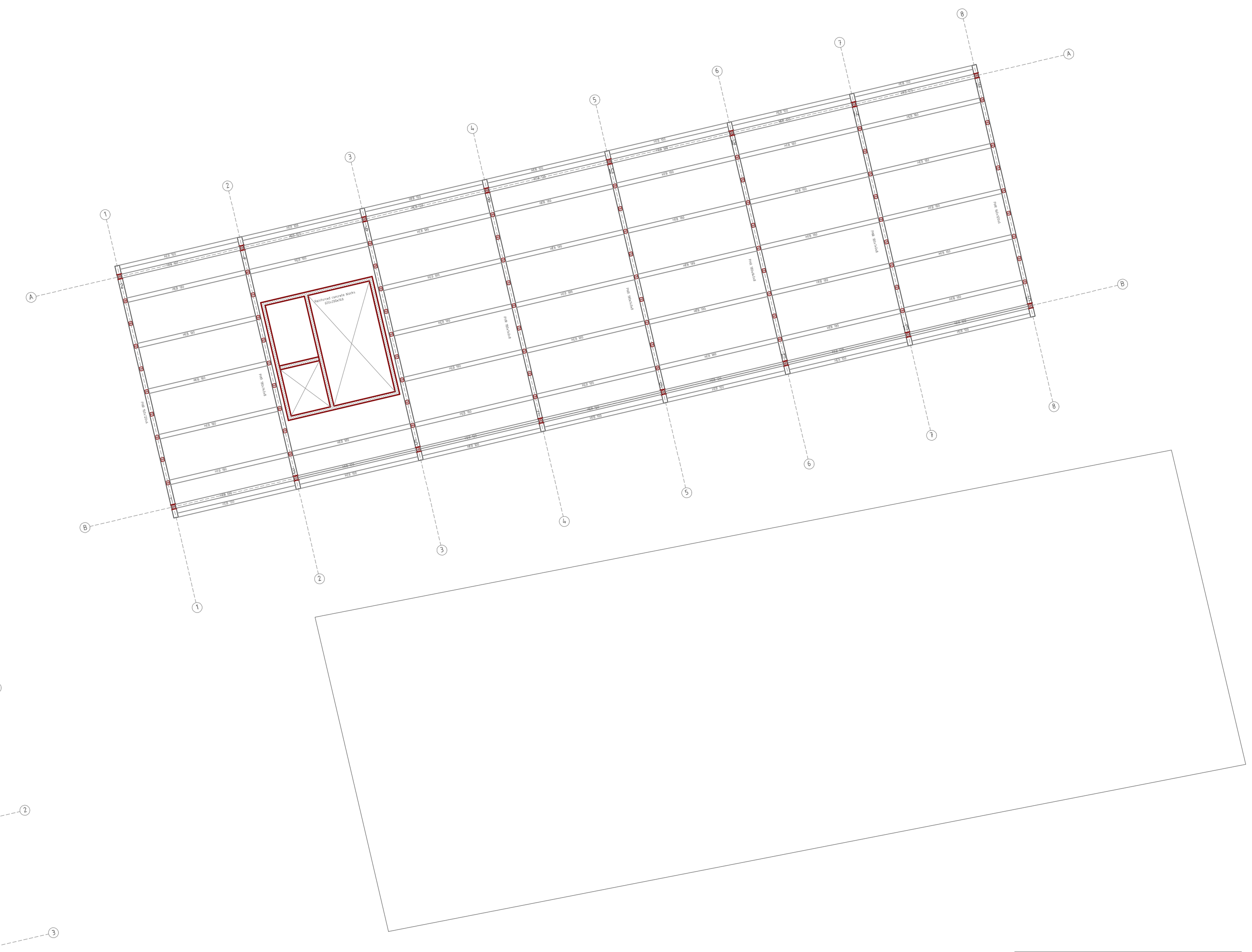
PILLARS BUILDING 3			
	Storey 1	Storey 2	Storey 3
End pillars	HEB 200	HEB 180	HEB 160
Central pillars	HEB 220	HEB 220	HEB 200

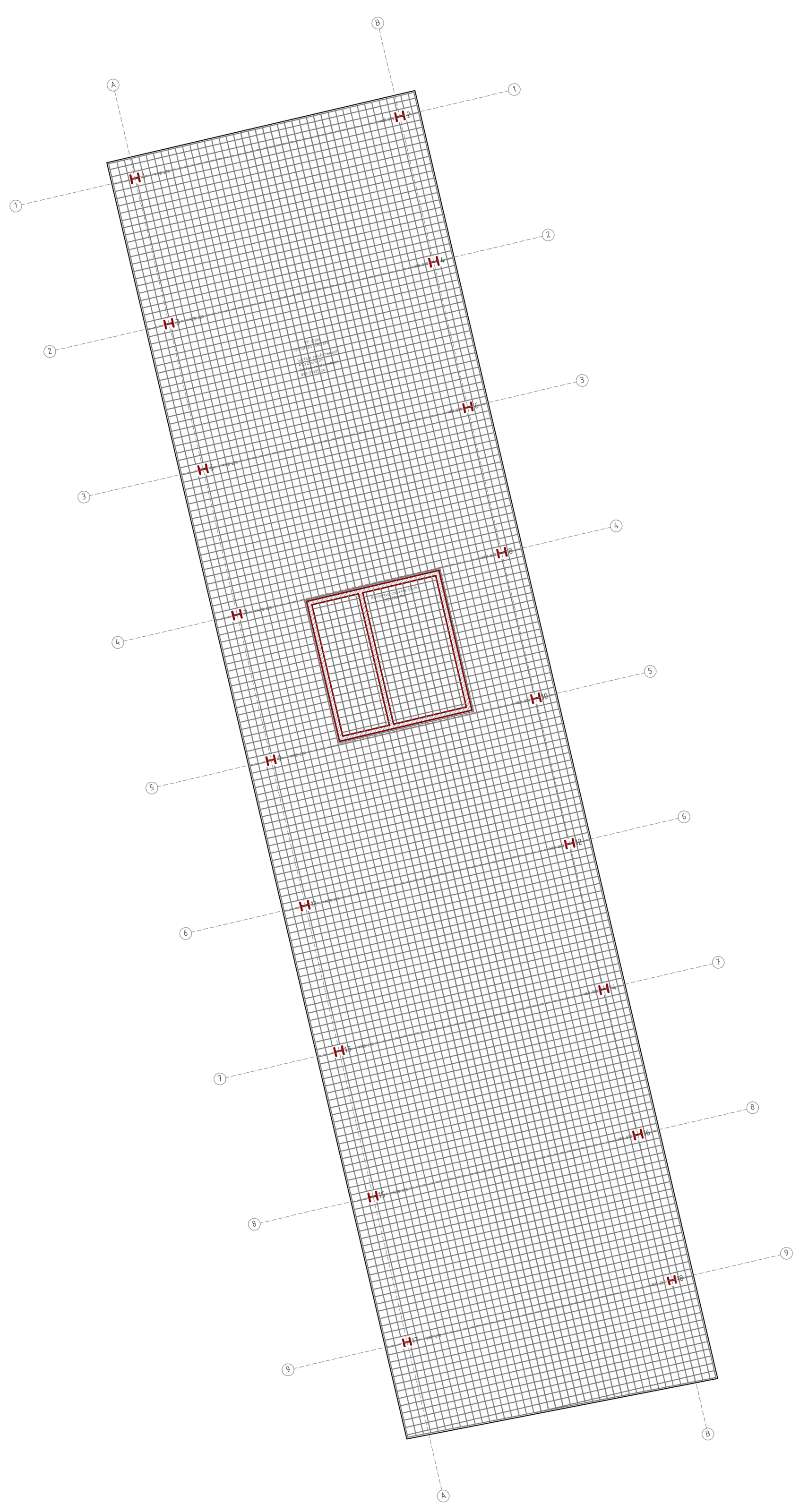


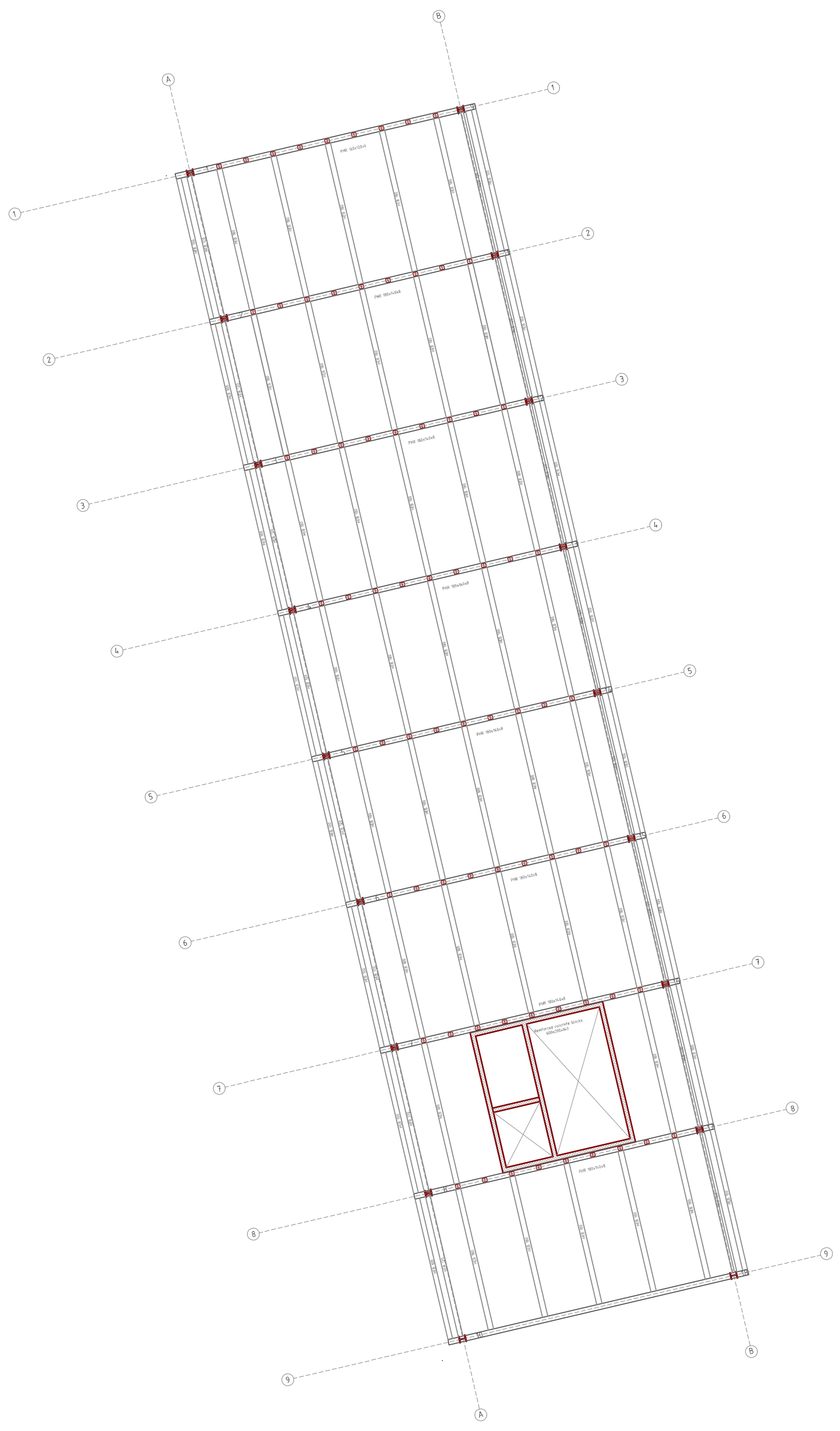
RICE AND BEER LAB__ FOUNDATION AND STRUCTURE _1.200_1.75

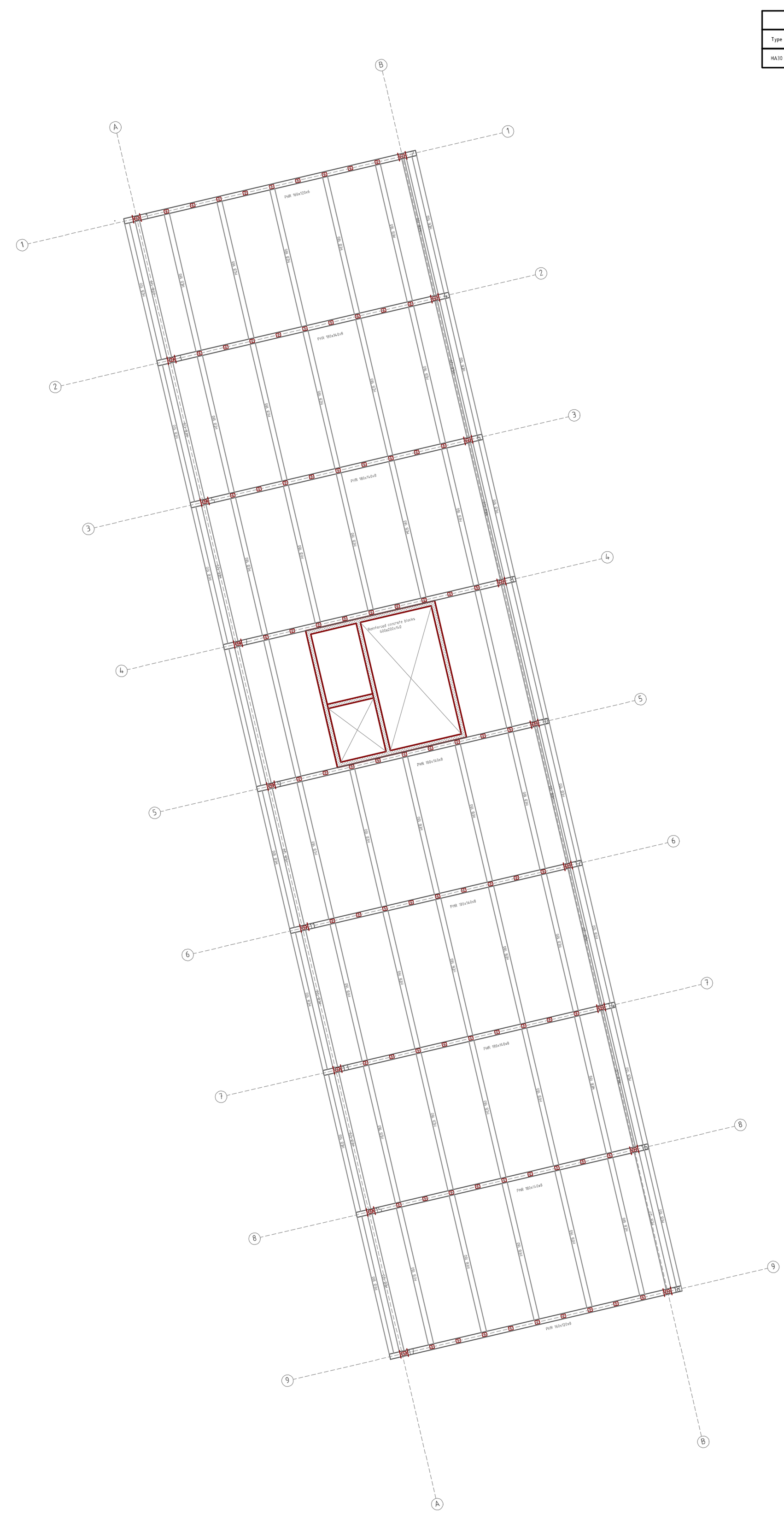
Aida Martín Sendra_TFM

STRUCTURAL PLANS 1.200
LEVEL 4.50 m



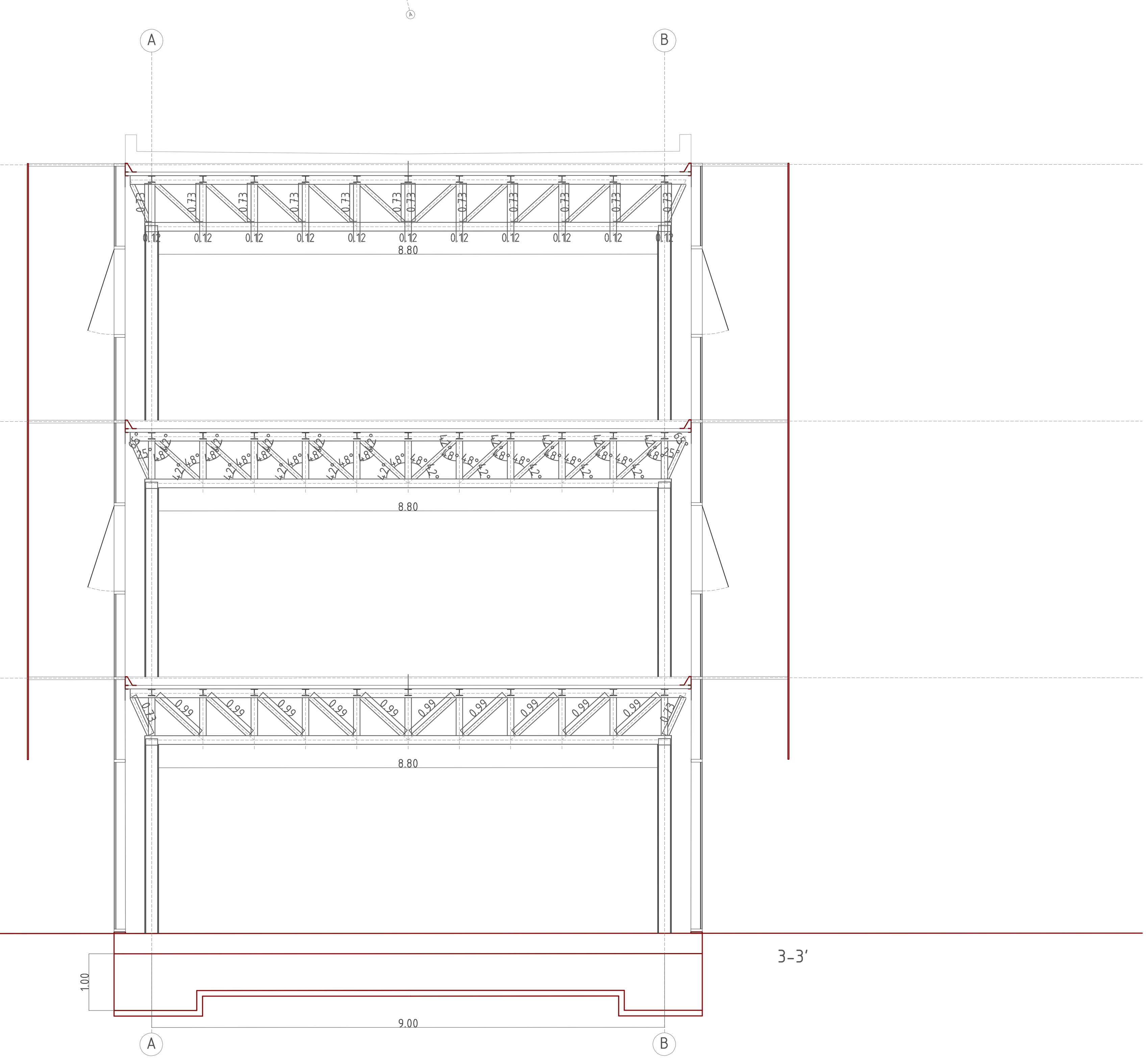






STEEL					
Type	fy (N/mm2)	fu (N/mm2)	γM0	γM1	γM2
S275	275,00	410,00	1,05	1,05	1,25

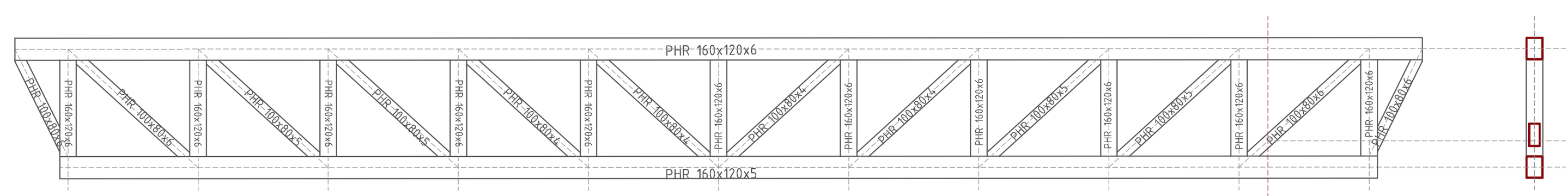
Reinforced concrete						
Type	fck (N/mm2)	α long term	γc	Pilars reinforcement	Beams reinfocement	γs
HA30	30,00	1,00	1,50	B500	B500	1,15



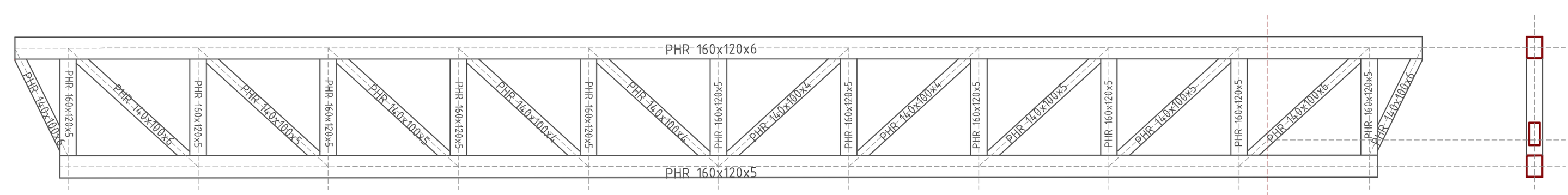
3-3'

TRUSSES SECTIONS 1.50

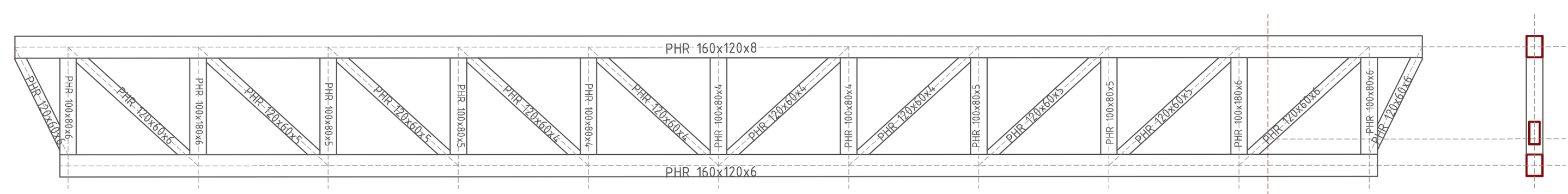
Building A
End trusses



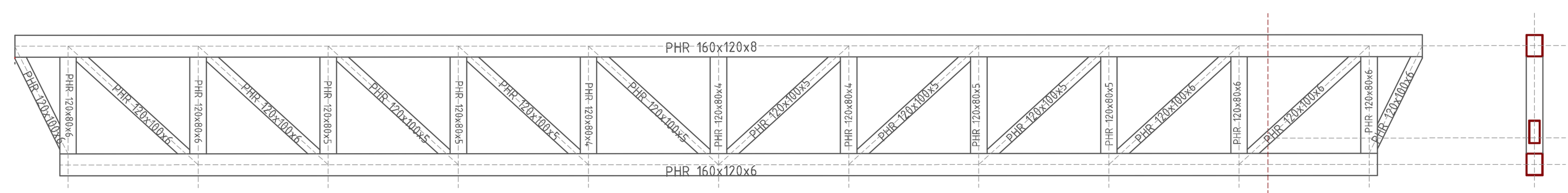
Building A
Central trusses



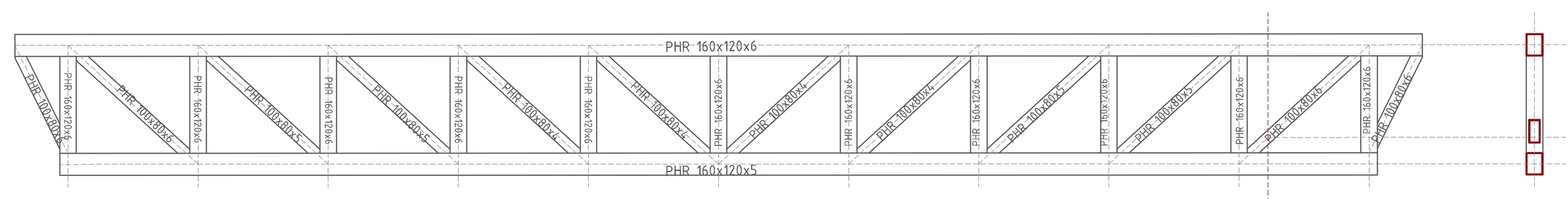
Building B
End trusses



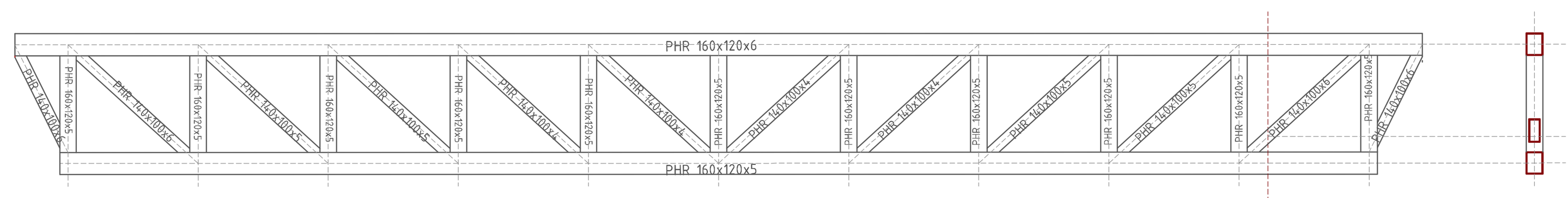
Building B
Central trusses



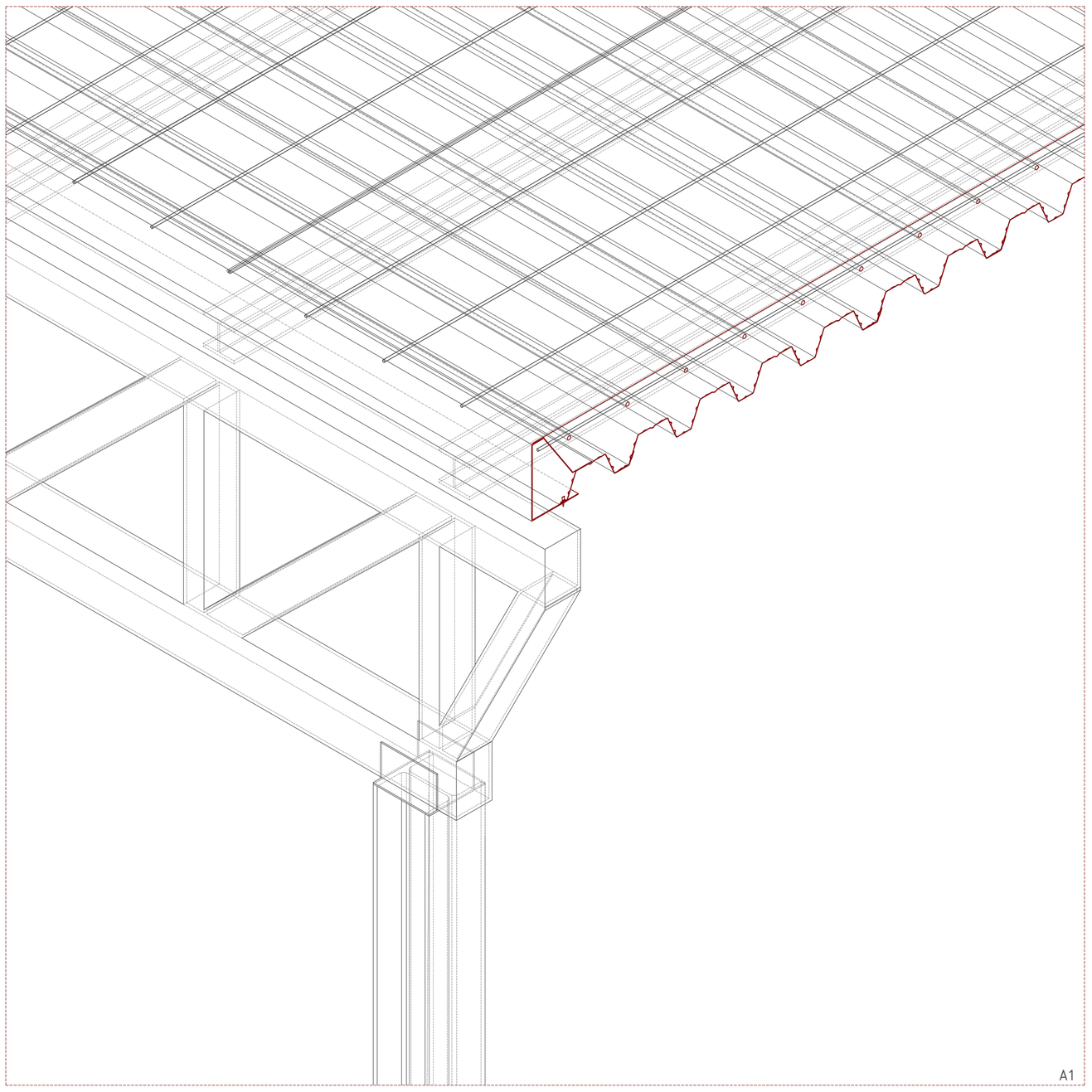
Building C
End trusses

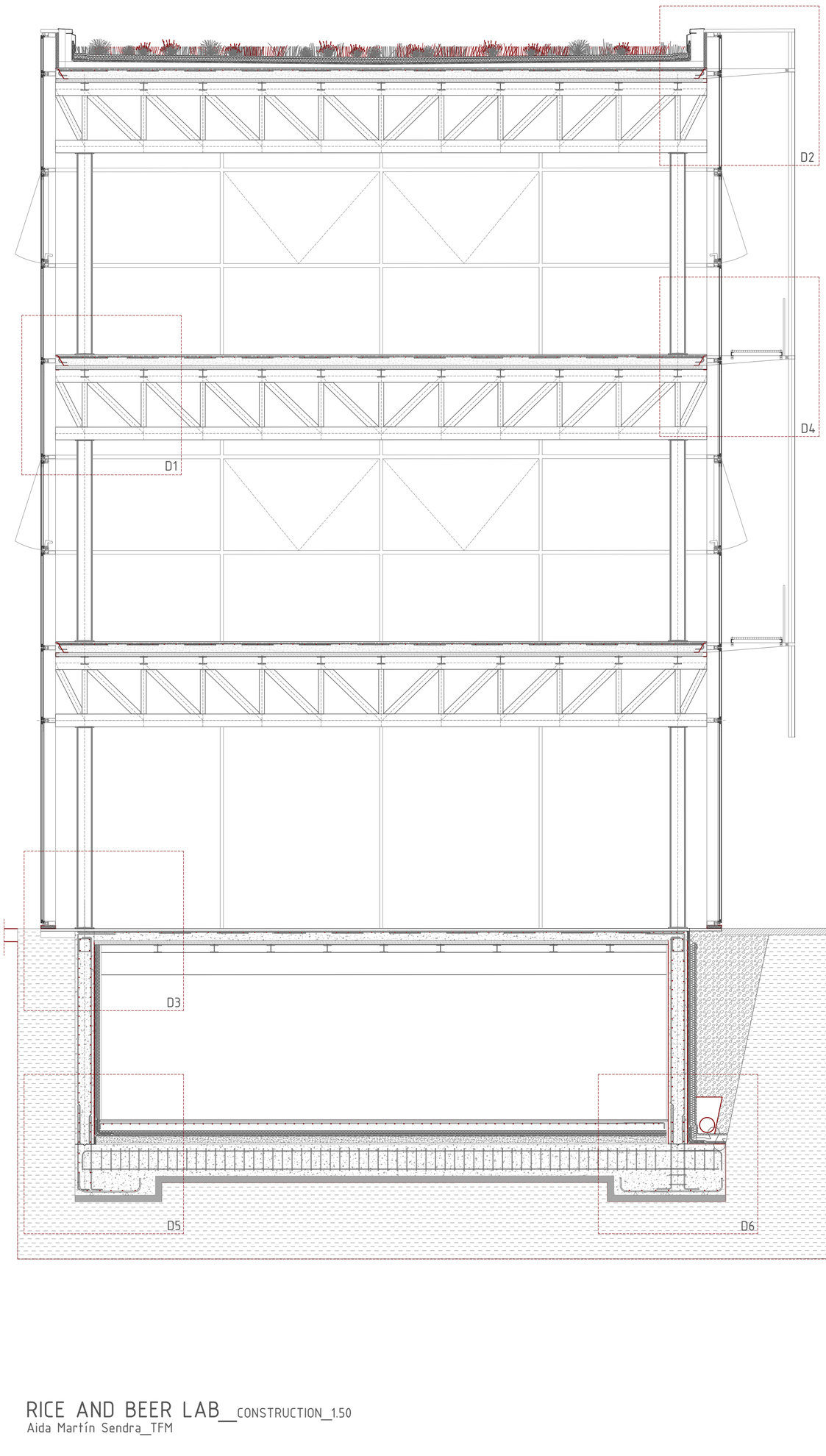


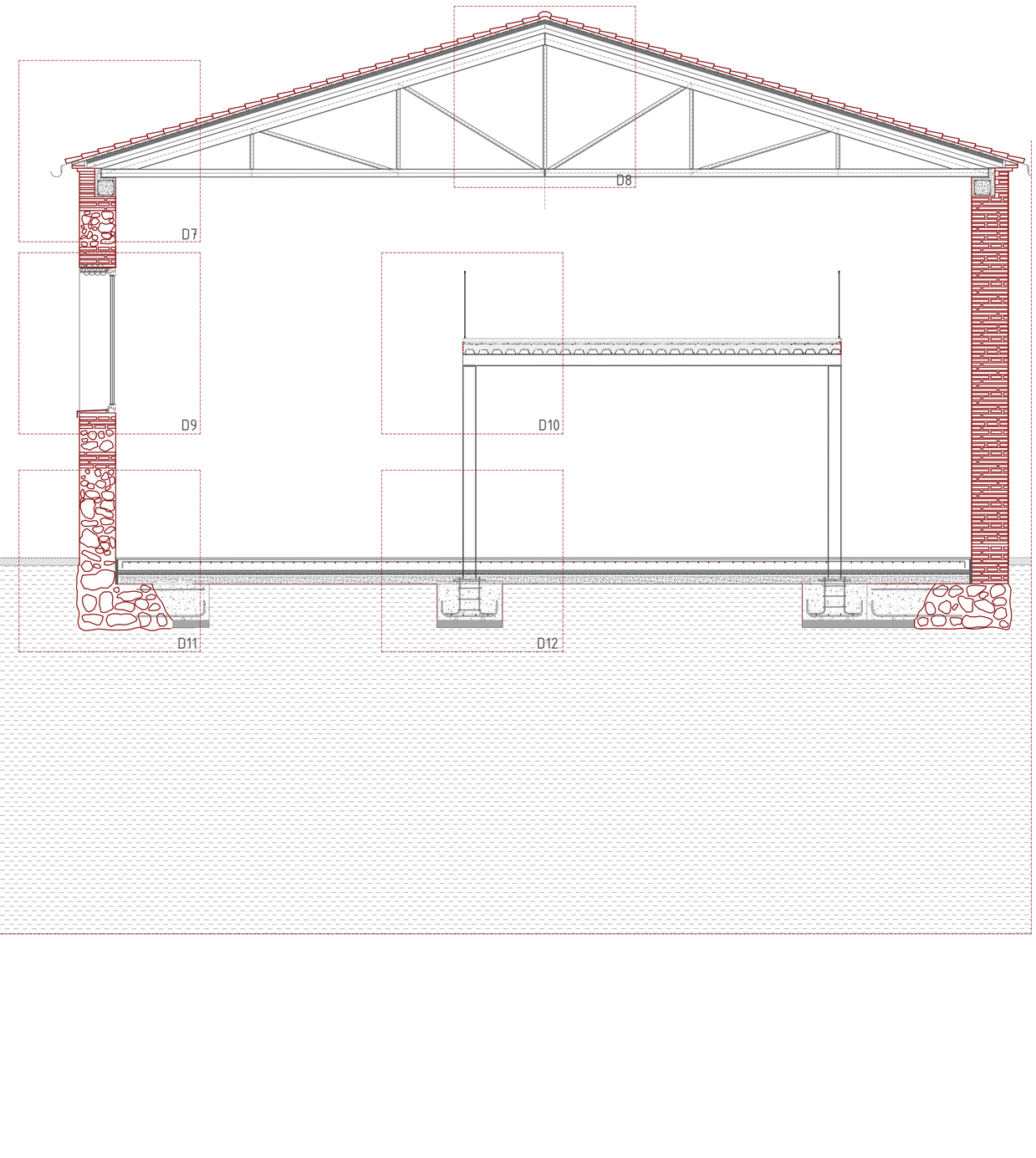
Building C
Central trusses



RICE AND BEER LAB__FOUNDATION AND STRUCTURE __1.200__1.75
Aida Martín Sendra_TFM







RICE AND BEER LAB__CONSTRUCTION_1.50

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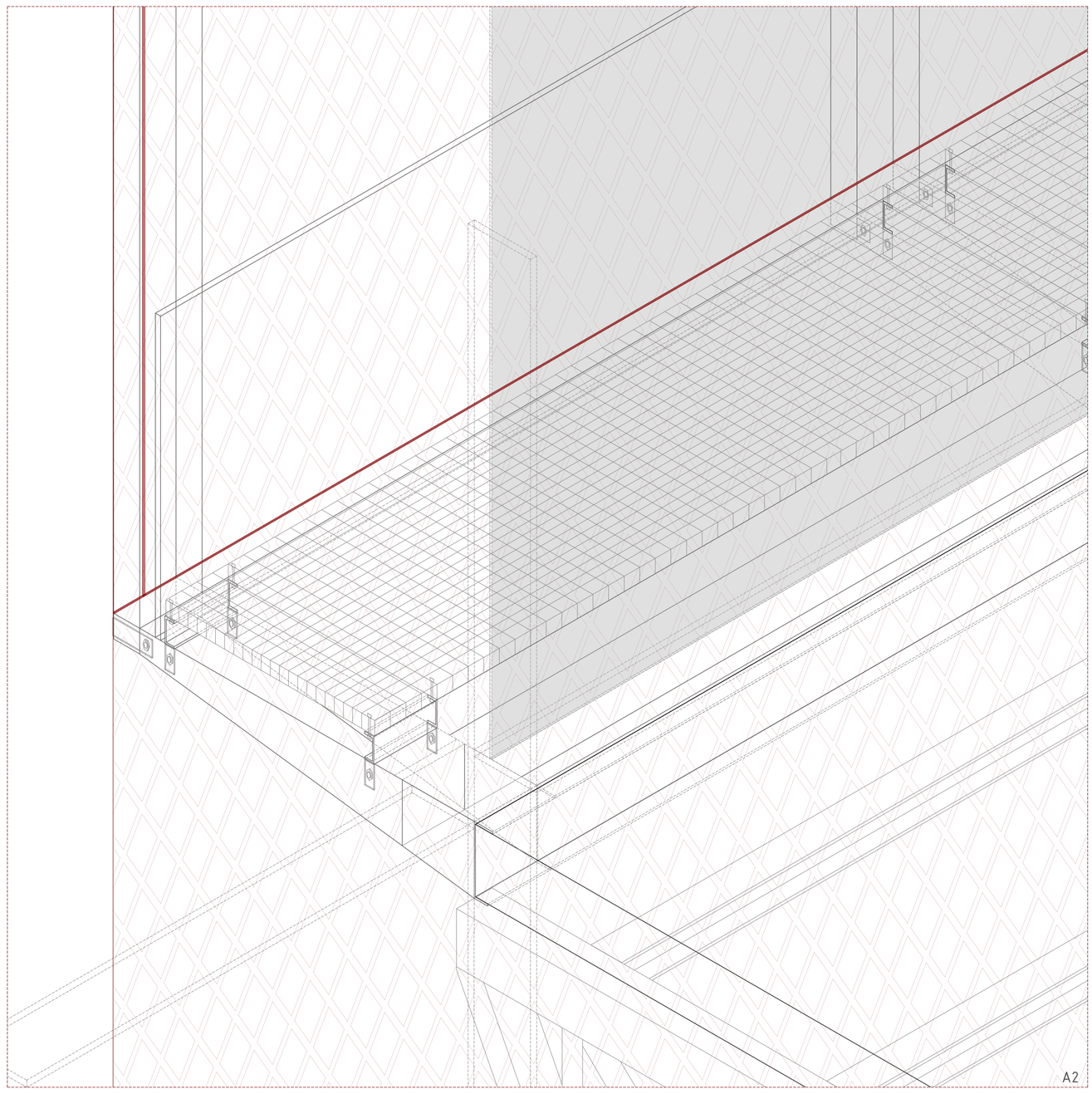
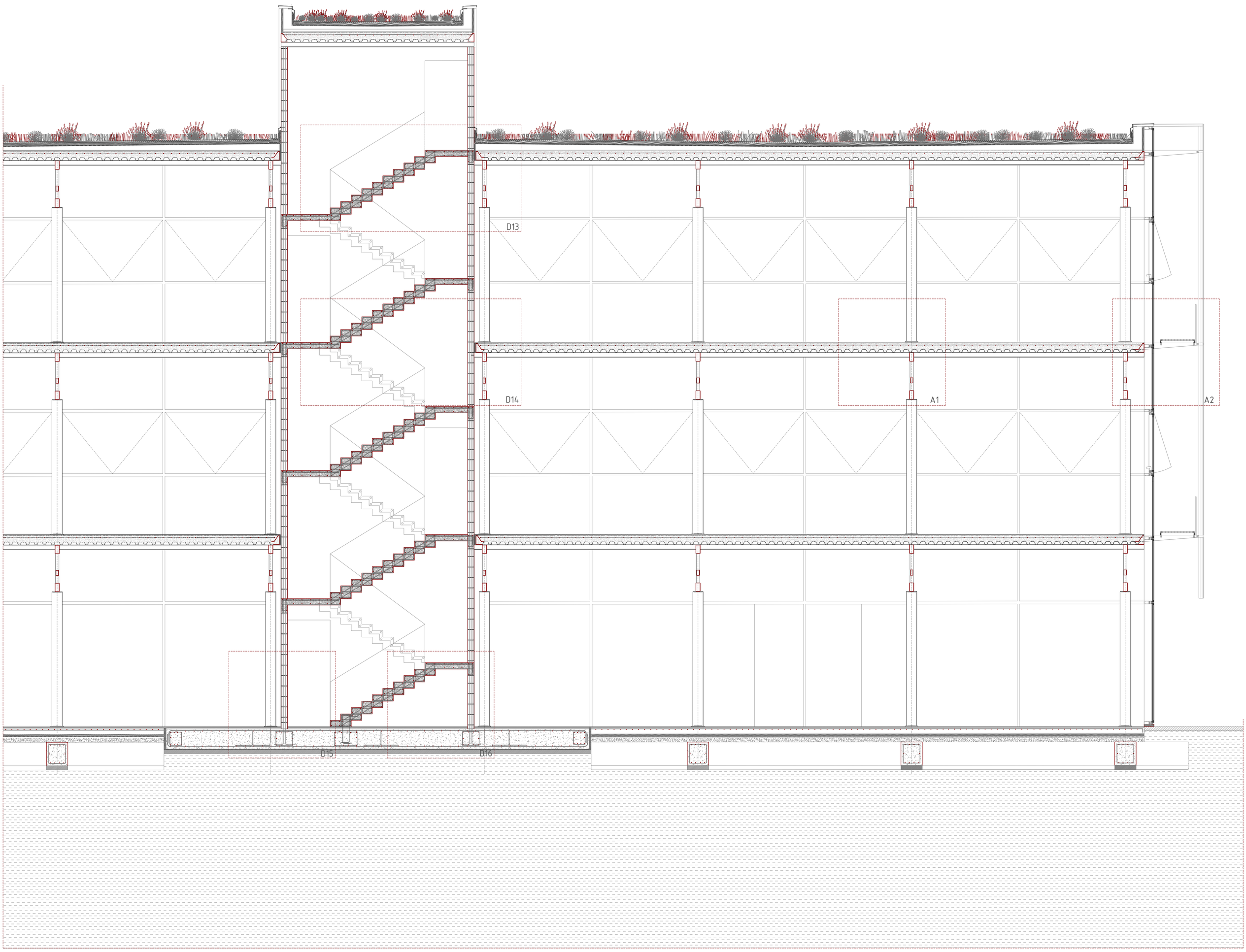
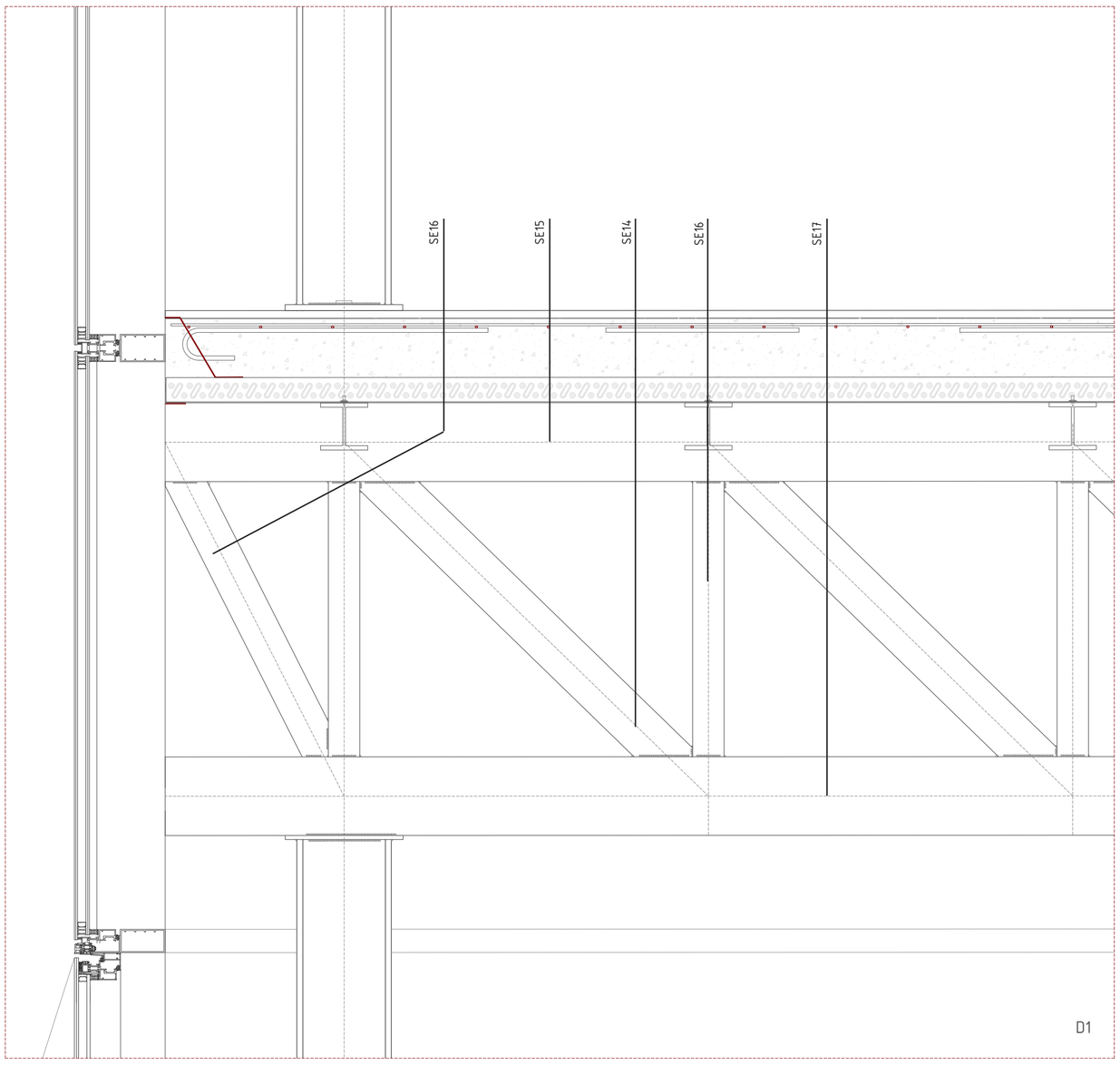


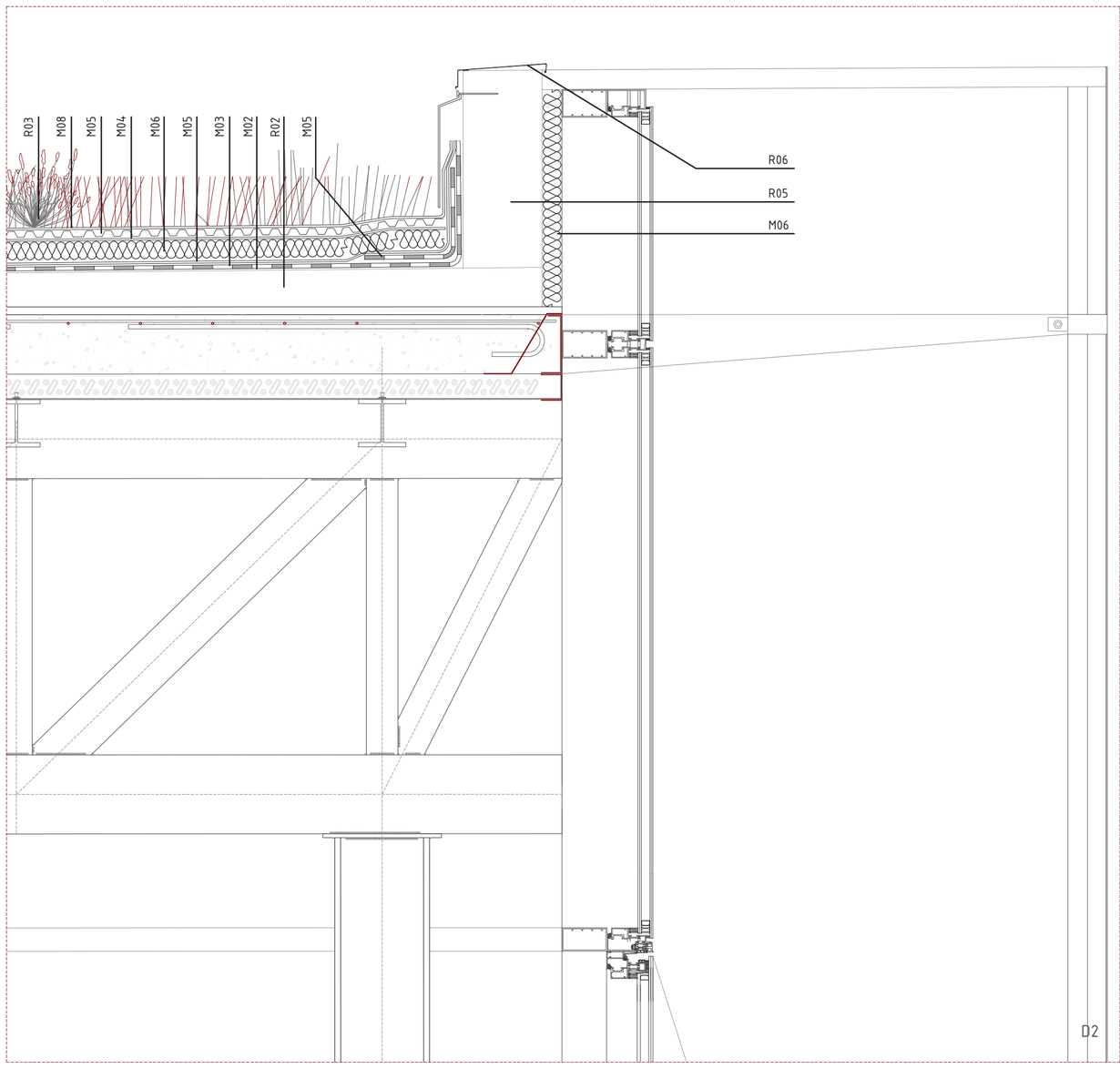


RICE AND BEER LAB__CONSTRUCTION_1.50

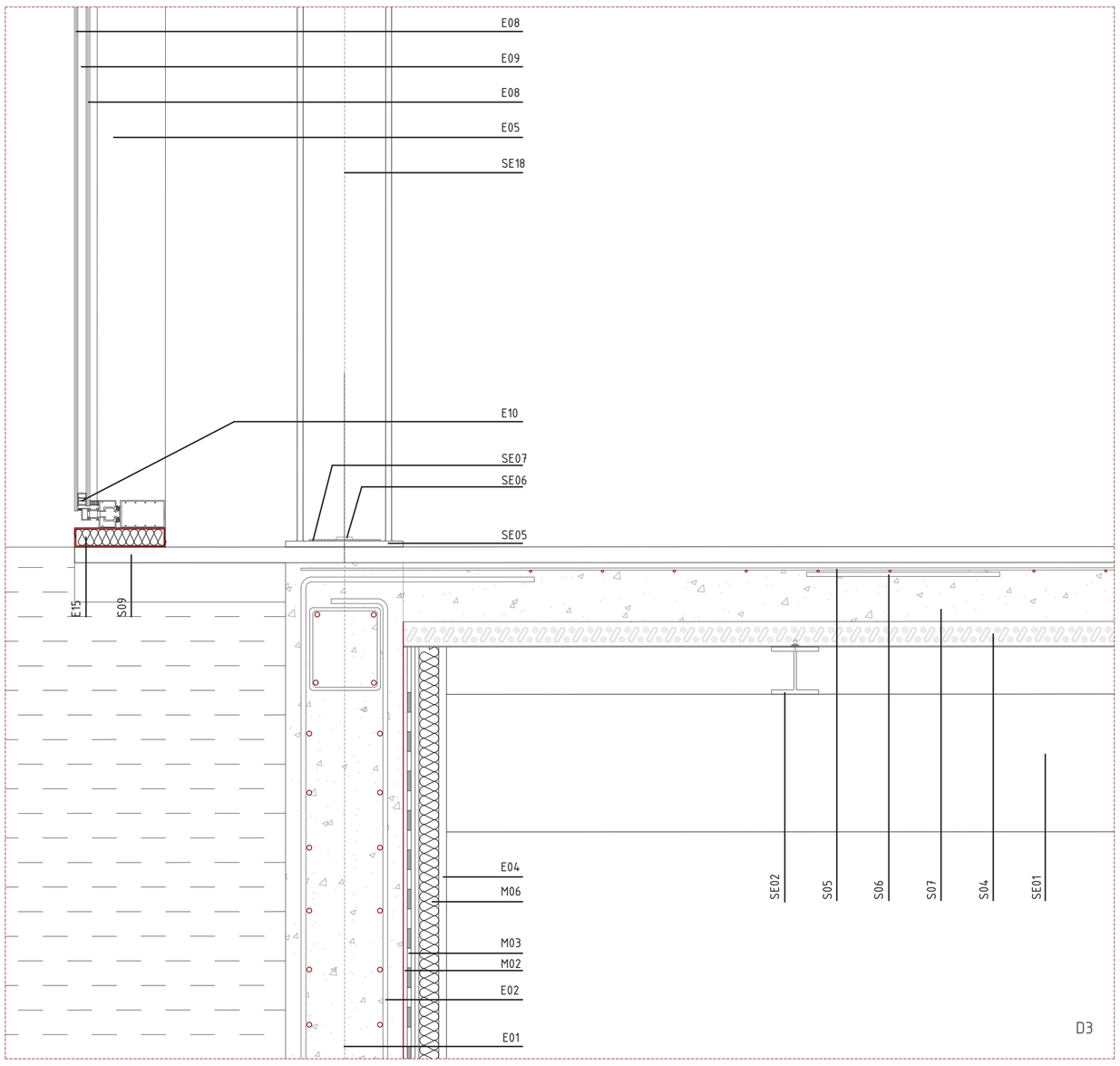
Aida Martín Sendra_TFM



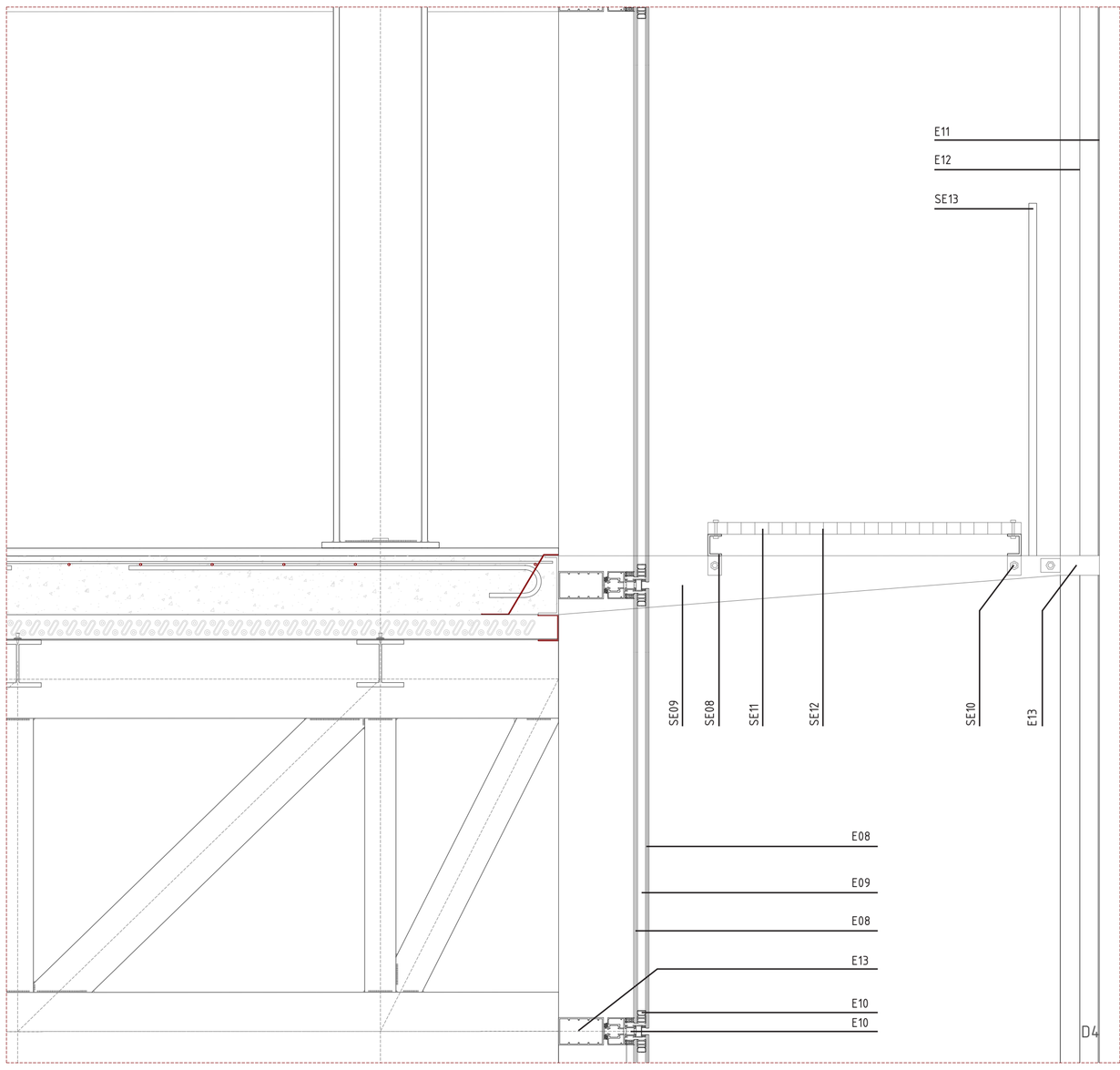
D1



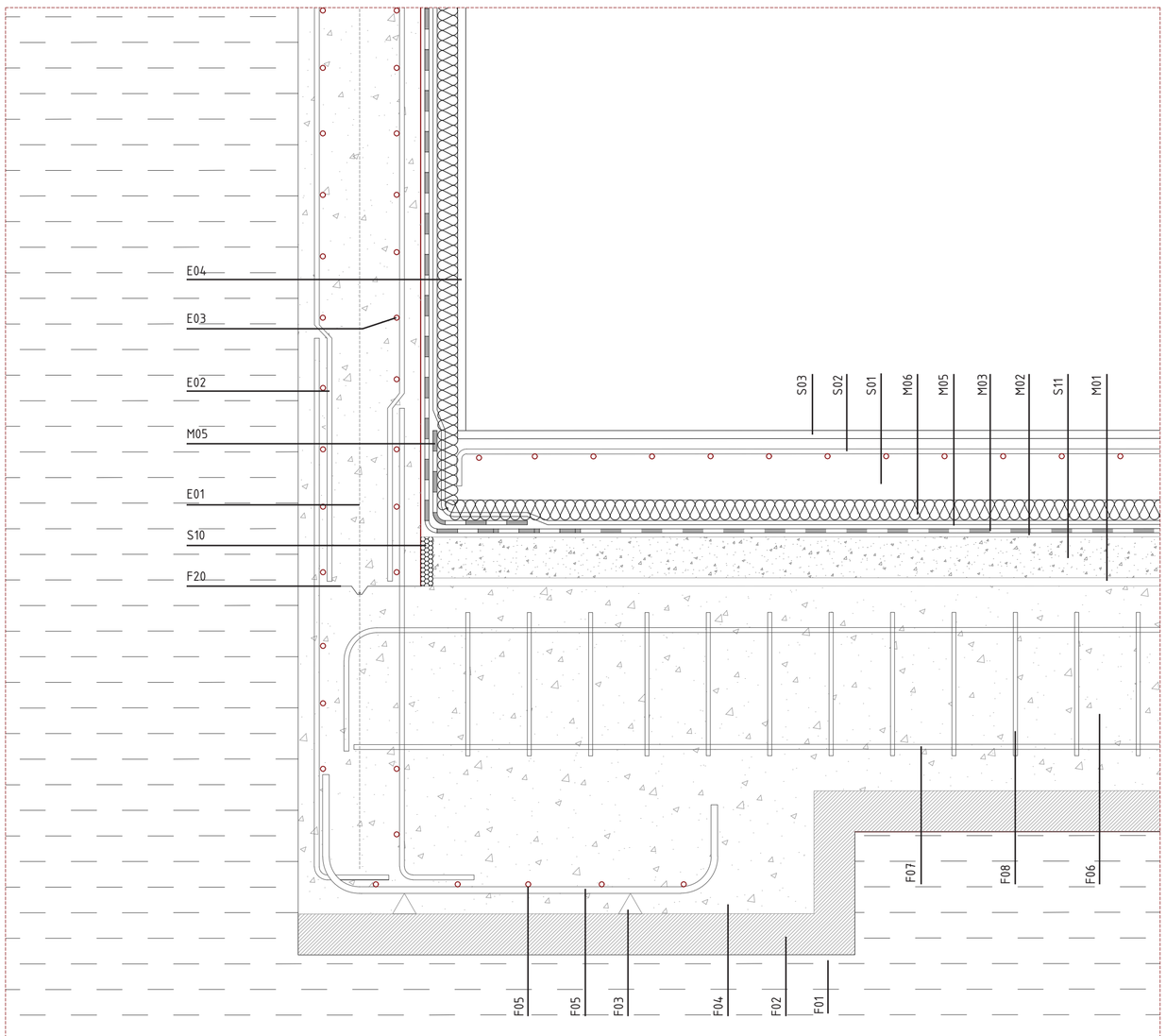
D2



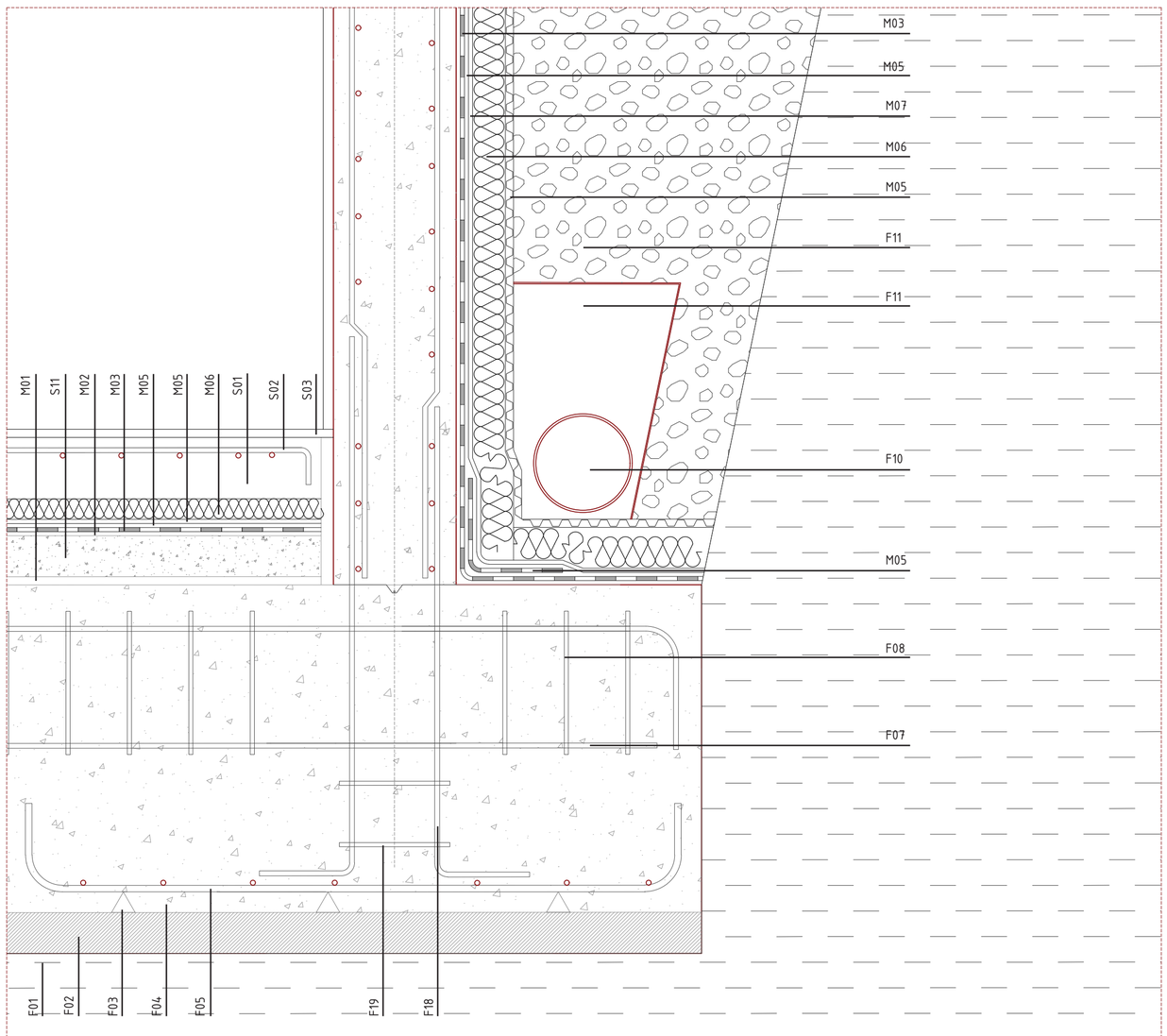
D3



D4



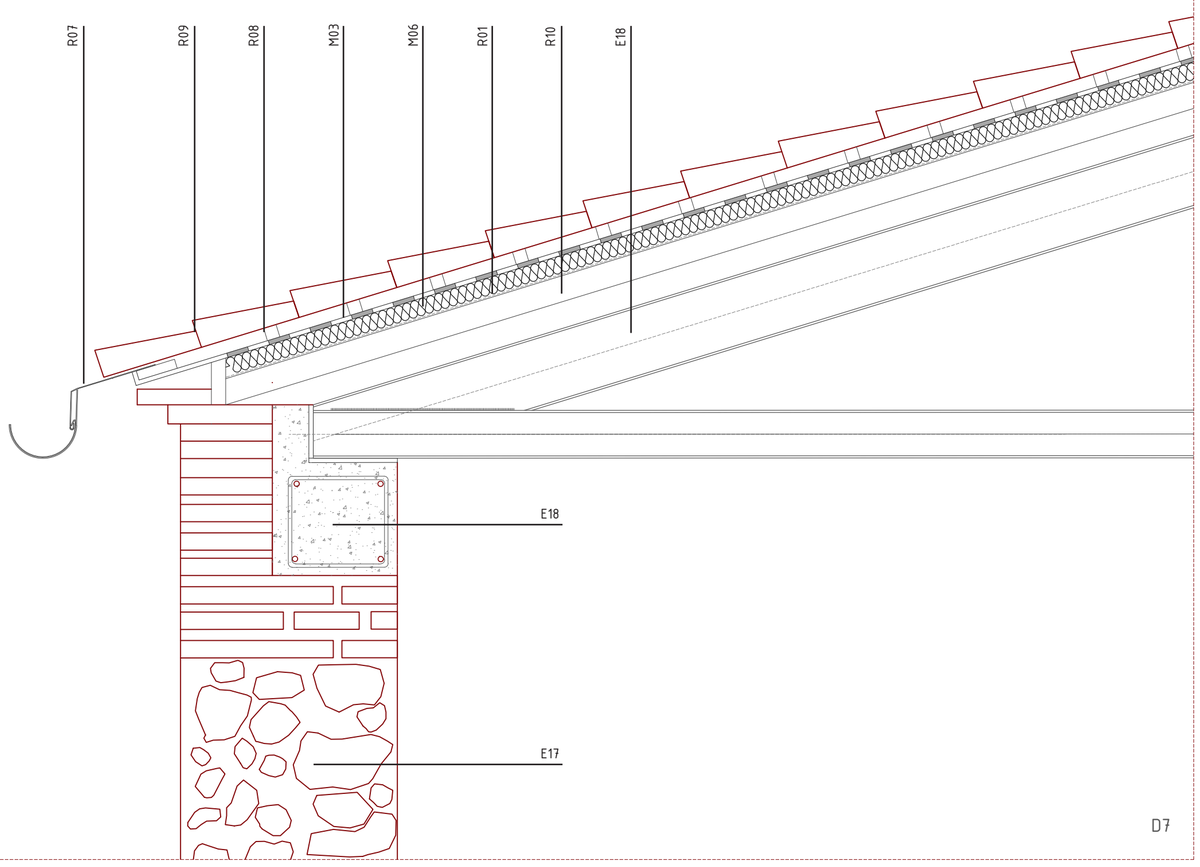
D5



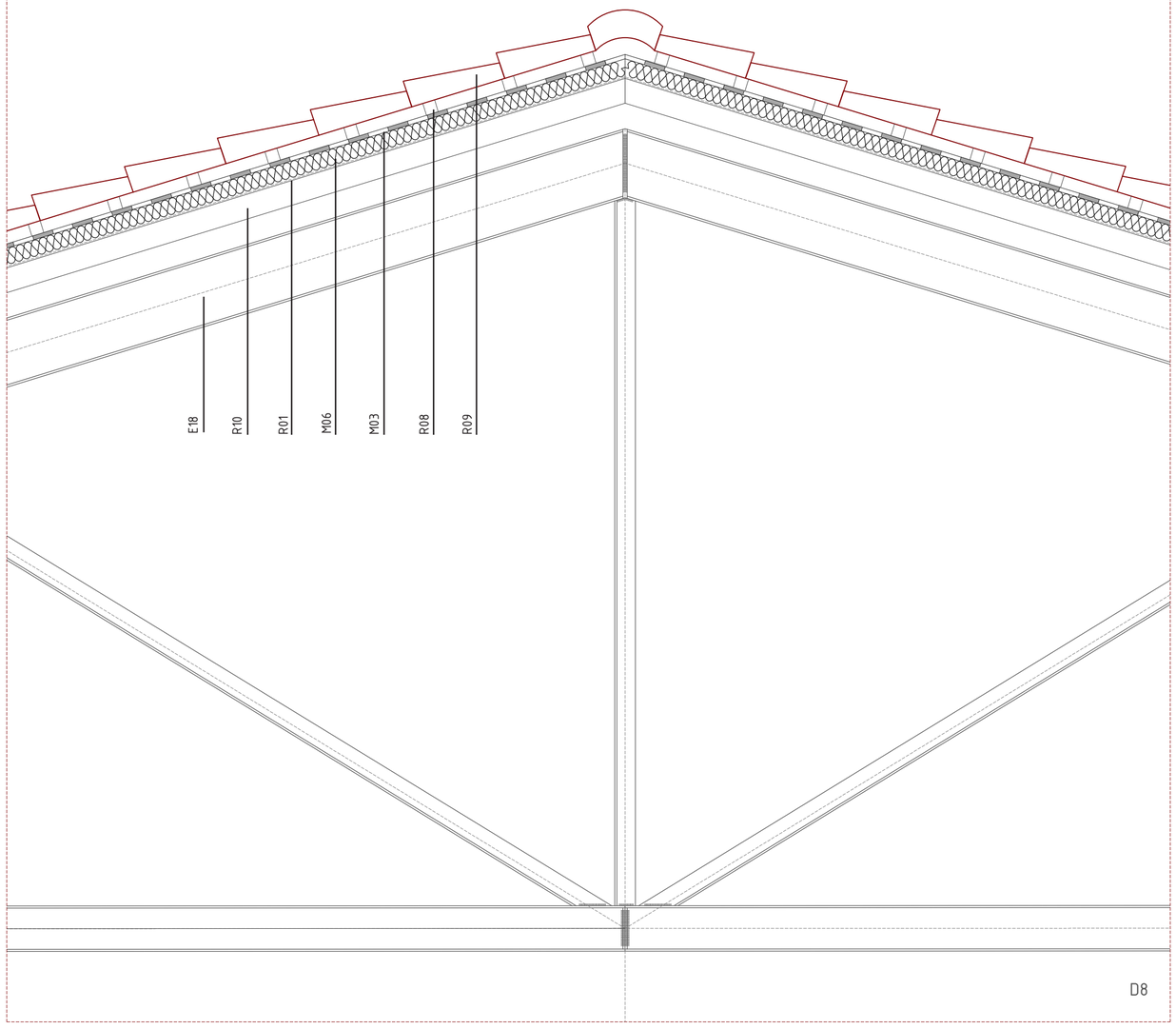
D6

RICE AND BEER LAB_ CONSTRUCTION_1.10

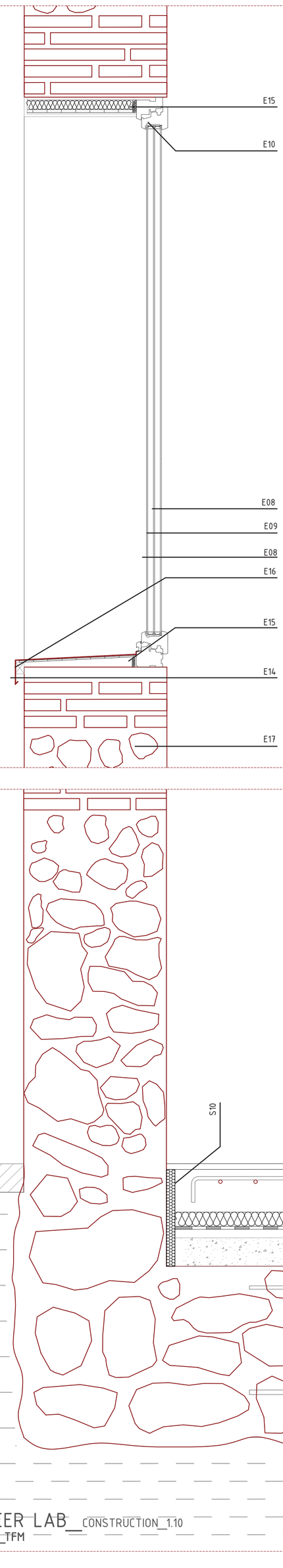
Aida Martín Sendra_TFM



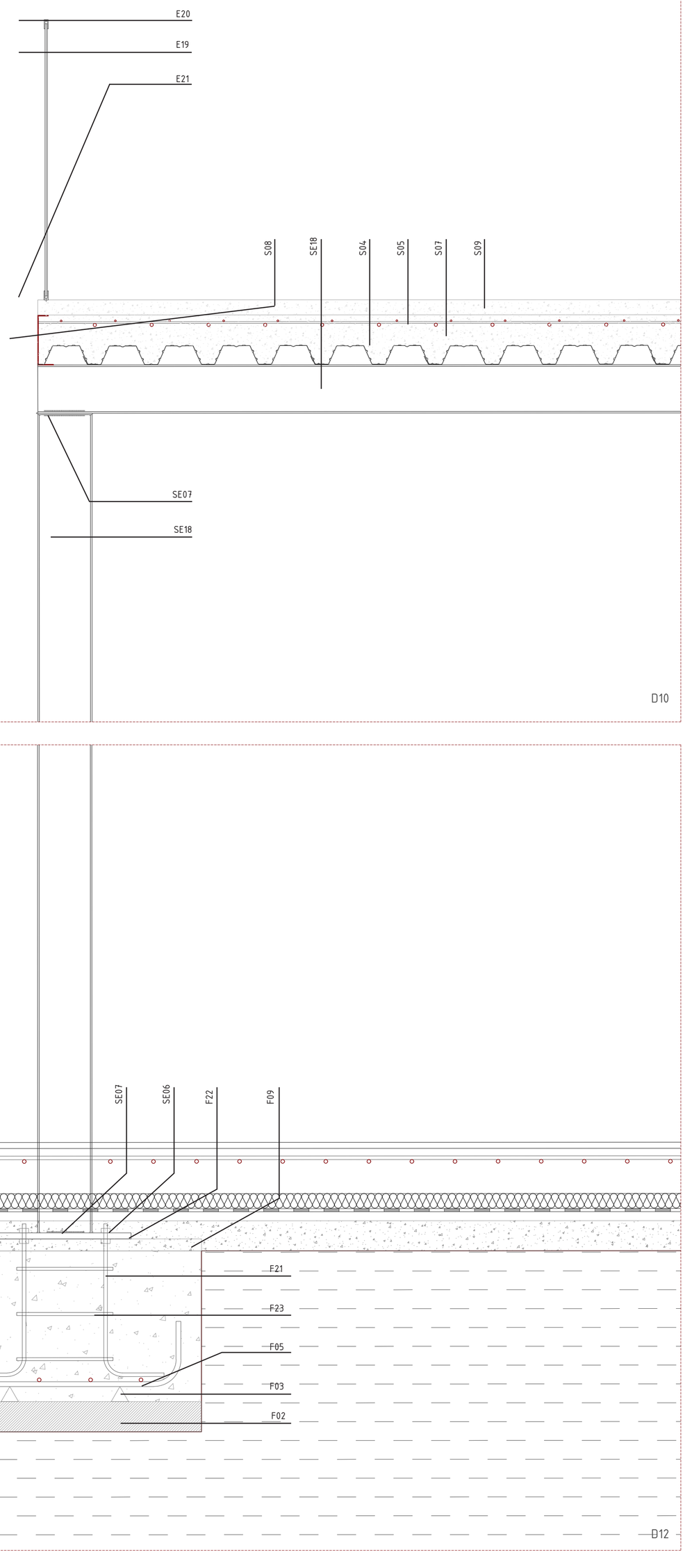
D7



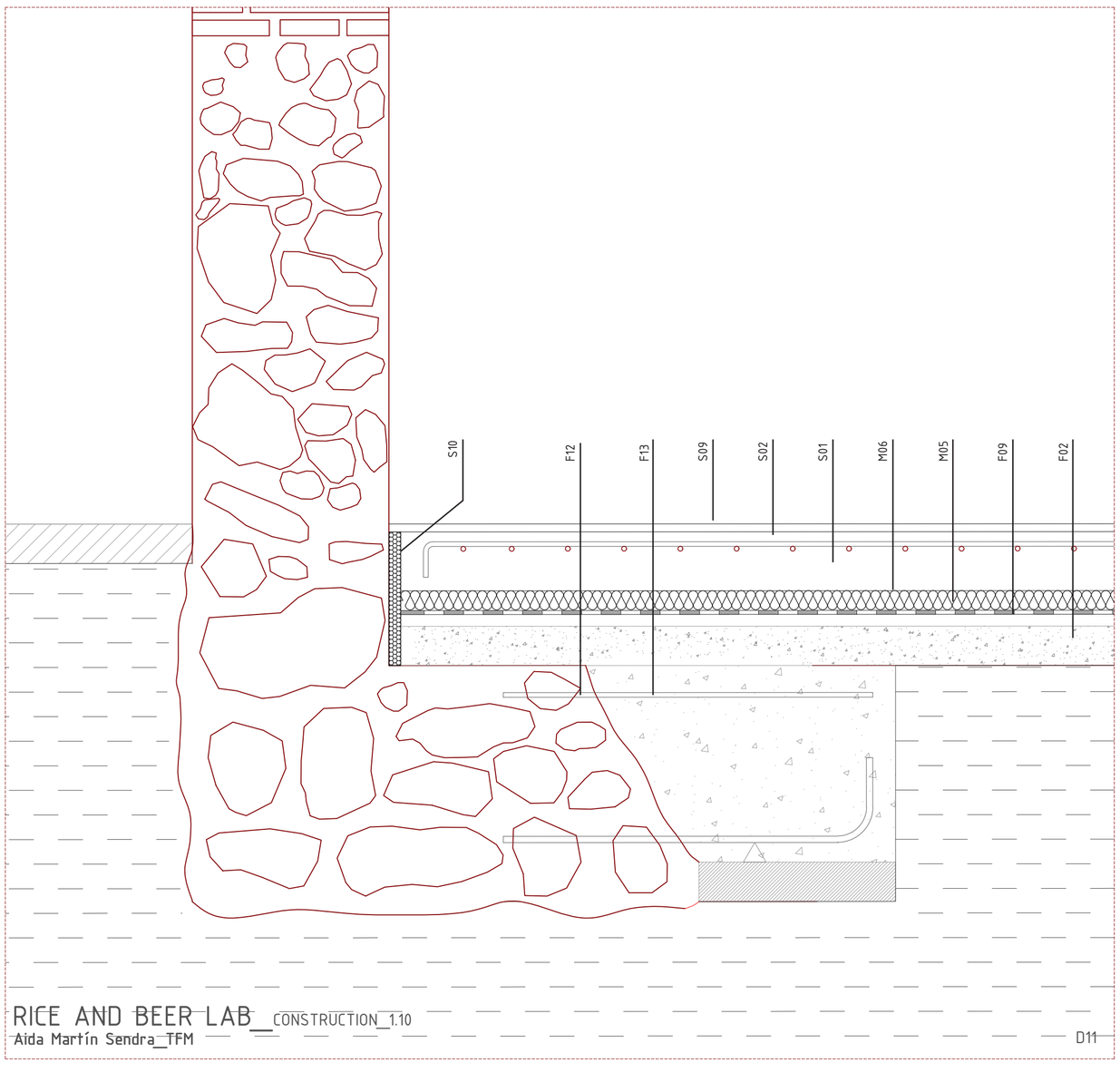
D8



D9



D10



D11

D12

RICE AND BEER LAB__CONSTRUCTION_1.10

Aida Martín Sendra_TFM

FOUNDATION (F)
F01_Compacted base
F02_Mud slab
F03_Mesh spacers
F04_HA30 concrete
F05_Bottom footing reinforcement ø16
F06_Strap beam
F07_Strap beam reinforcement ø12
F08_Strap beam links ø8
F09_Regulating mortar layer
F10_Perforated drainpipe
F11_Drainage gravel
F12_Original masonry footing
F13_Reinforcement footing
F14_Foundation slab
F15_Top mesh support chairs
F16_Bottom slab reinforcement ø16
F17_Top slab reinforcement ø16
F18_Wall reinforcement ø12
F19_Wall links ø10
F20_Shear keys
F21_Bolt ø16
F22_Anchorage plate
F23_Links ø12
F24_Foundation beam
F25_Tie bars
F26_Stairs reinforcement

SLABS (S)
S01_Sill plate
S02_Reinforcement sill plate mesh ø16
S03_Coloured polished concrete
S04_Corrugated sheet steel profile
S05_Anti-fracture mesh
S06_Negative framework
S07_HA 30 concrete
S08_ Perimeter section
S09_Continuous microcement cladding
S10_Expansion joint
S11_Mud slab

ENCLOSURES (E)
E01_HA30 concrete wall
E02_Wall reinforcement ø12
E03_Wall links ø8
E04_Continuous microcement cladding
E05_Curtain wall uprights
E06_Curtain wall transoms
E07_Curtain wall
E08_Double glass 4+4
E09_Air chamber
E10_Carpentry with thermal bridge breakage
E11_PVC textile netting
E12_Skin uprights
E13_Skin transoms
E14_Sill
E15_Polyurethane foam
E16_Silicone sealant
E17_Original masonry wall
E18_Support beam
E19_Safety glass
E20_Handrails
E21_Anchoring
E22_Safety glass handrail
E23_Rail fasteners

MEMBRANES (M)
M01_Anti-capillary layer
M02_Asphaltic primer
M03_Waterproofing sheet
M05_Reinforcing waterproofing sheet
M05_Geotextile separating layer
M06_Thermal insulation
M07_Anti-punching geotextile layer
M08_Rooting membrane

STRUCTURAL ELEMENTS (SE)
SE01_HEB 240
SE02_HEB 180
SE03_Perimeter banding
SE04_HEB 200
SE05_Anchor plate
SE06_Screws
SE07_Welding
SE08_CPS canal section
SE09_UPN Cantilever
SE10_Catwalk anchor
SE11_Catwalk for maintenance
SE12_Aluminium grate
SE13_Steel railing
SE14_Truss
SE15_PHR 160x120x6
SE16_PHR 100x80x6
SE17_PHR 160x120x5
SE18_HEB 220
SE19_Reinforced concrete blocks 600x200x140
SE20_Concrete blocks reinforcement
SE21_In situ concrete stairs
SE22_Handrail fixing

ROOF (R)
R01_Vapour barrier
R02_Slope concrete
R03_Vegetation
R04_Topsoil layer
R05_Concrete parapete
R06_Crowning plate
R07_Gutter
R08_Wooden bards
R09_Roof tiles
R10_Roof support