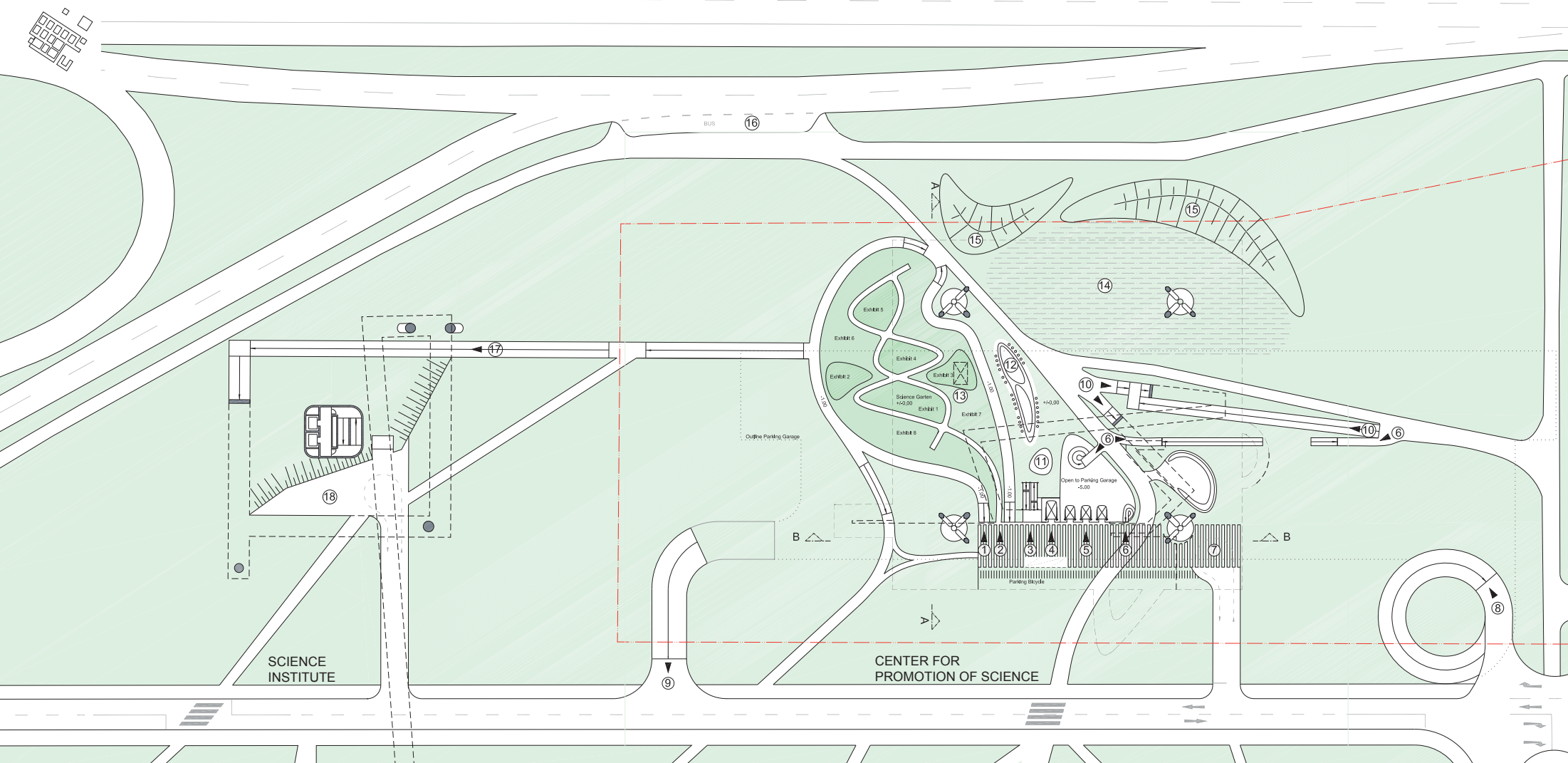




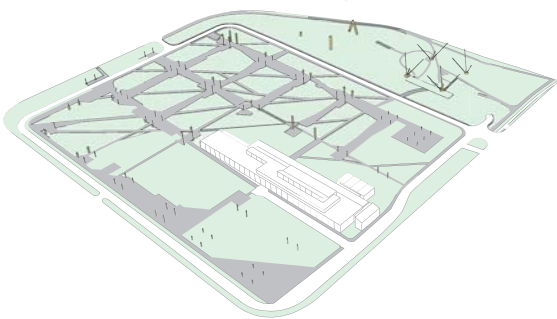
VIEW F1



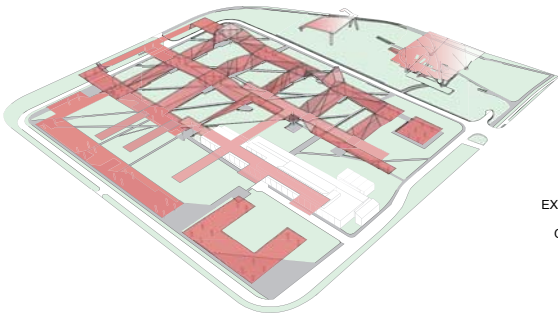
SITE PLAN +0.00
1:500



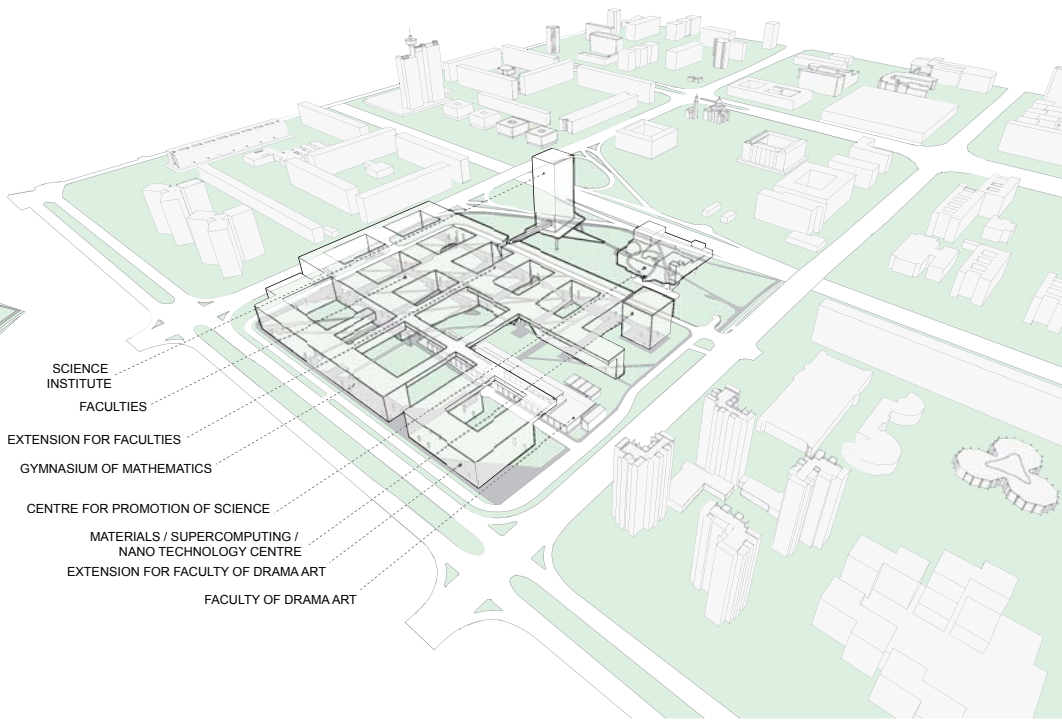
- | | | | | | |
|---|--|----|---|----|---|
| 1 | SUNKEN PATH SURROUNDING THE SCIENCE GARDEN | 8 | ENTRY PARKING GARAGE / DELIVERY | 17 | ELEVATED PATH THROUGH SCIENCE INSTITUTE TO FACULTIES AND RESEARCH CENTRES |
| 2 | ENTRANCE SCIENCE GARTEN | 9 | EXIT PARKING GARAGE / DELIVERY | 18 | ENTRANCE PLATEAU FOR SCIENCE INSTITUTE |
| 3 | ESCAPE STAIRS (2X120 CM - ONE OF THEM FOR FIRE BRIGADE) | 10 | PUBLIC ROUTE TO ROOF GARDEN | | |
| 4 | FREIGHT ELEVATOR (INTERIOR MEASURE MENTS 2,00 X 3,50M) | 11 | TOILETS | | |
| 5 | 3 PUBLIC ELEVATORS TO CFPOS LOBBY AND ROOF GARTEN (INTERIOR MEASUREMENTS 1,80 X 2,60M - AVERAGE WAITING TIME 33 SECONDS) | 12 | BAR | | |
| 6 | STAIRS TO PARKING GARAGE | 13 | RAIL CRANE CONNECTING SCIENCE GARDEN WITH EXHIBITION AND WORKSHOP | | |
| 7 | TAXI DROP-OFF | 14 | OPEN AIR CINEMA | | |
| | | 15 | SOUND BARRIERS | | |
| | | 16 | PUBLIC BUS STOP | | |



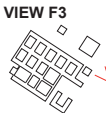
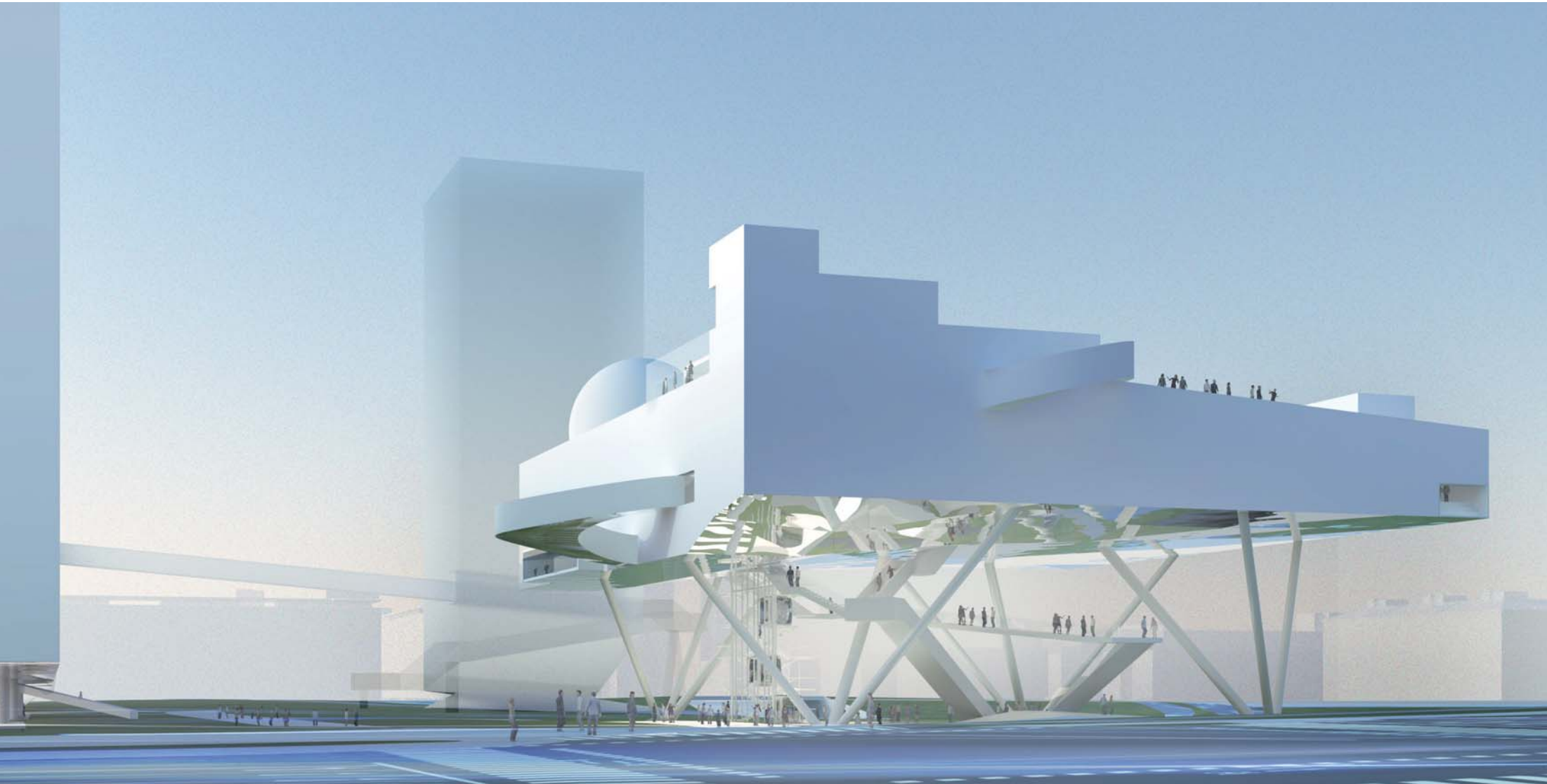
CONTINUOUS GARDEN
THE CITY SURFACE BELONGS TO EVERYBODY
ALL BUILDINGS ARE RAISED FROM THE GROUND



RAISED, FOLDED BUILDING UNDERSIDE




A1 AXONOMETRIC VIEW OF THE SITE

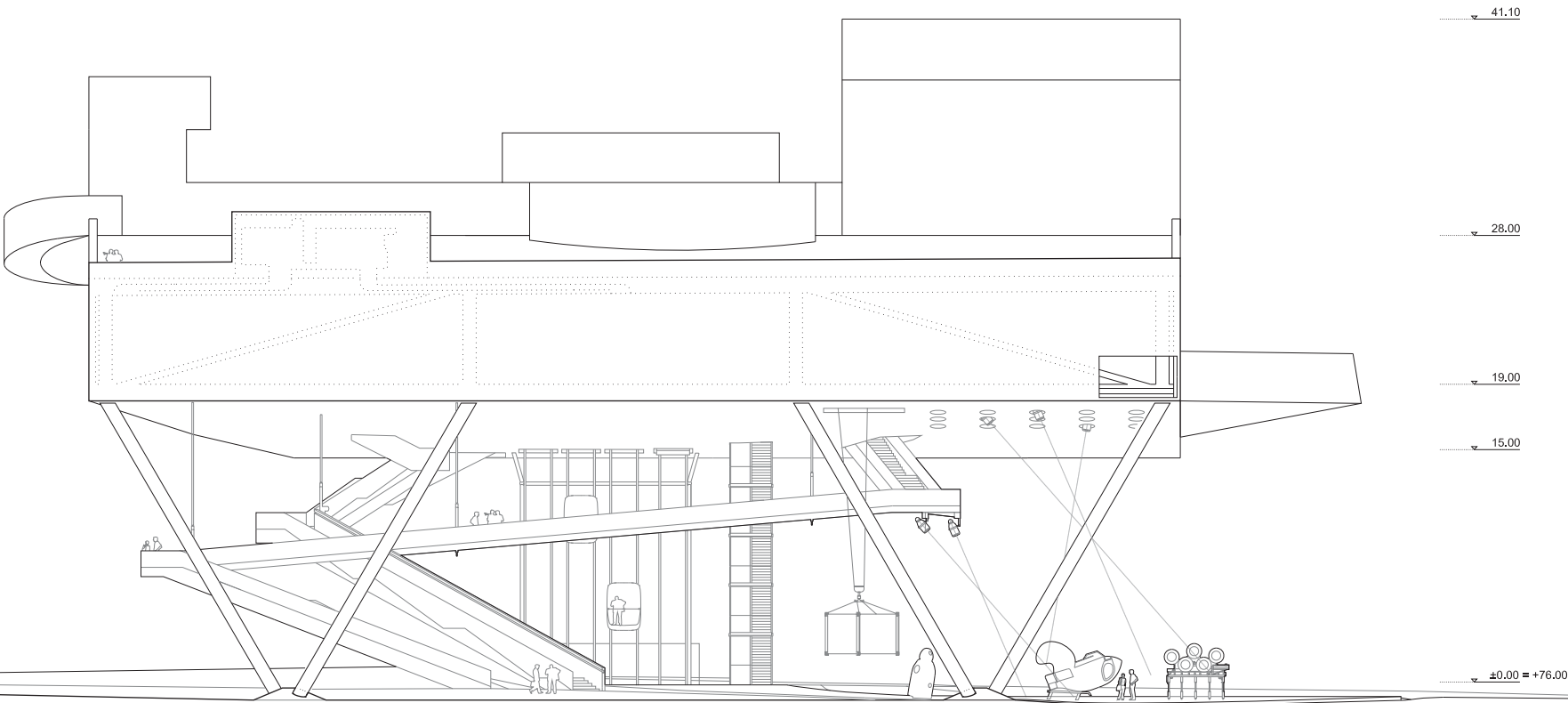
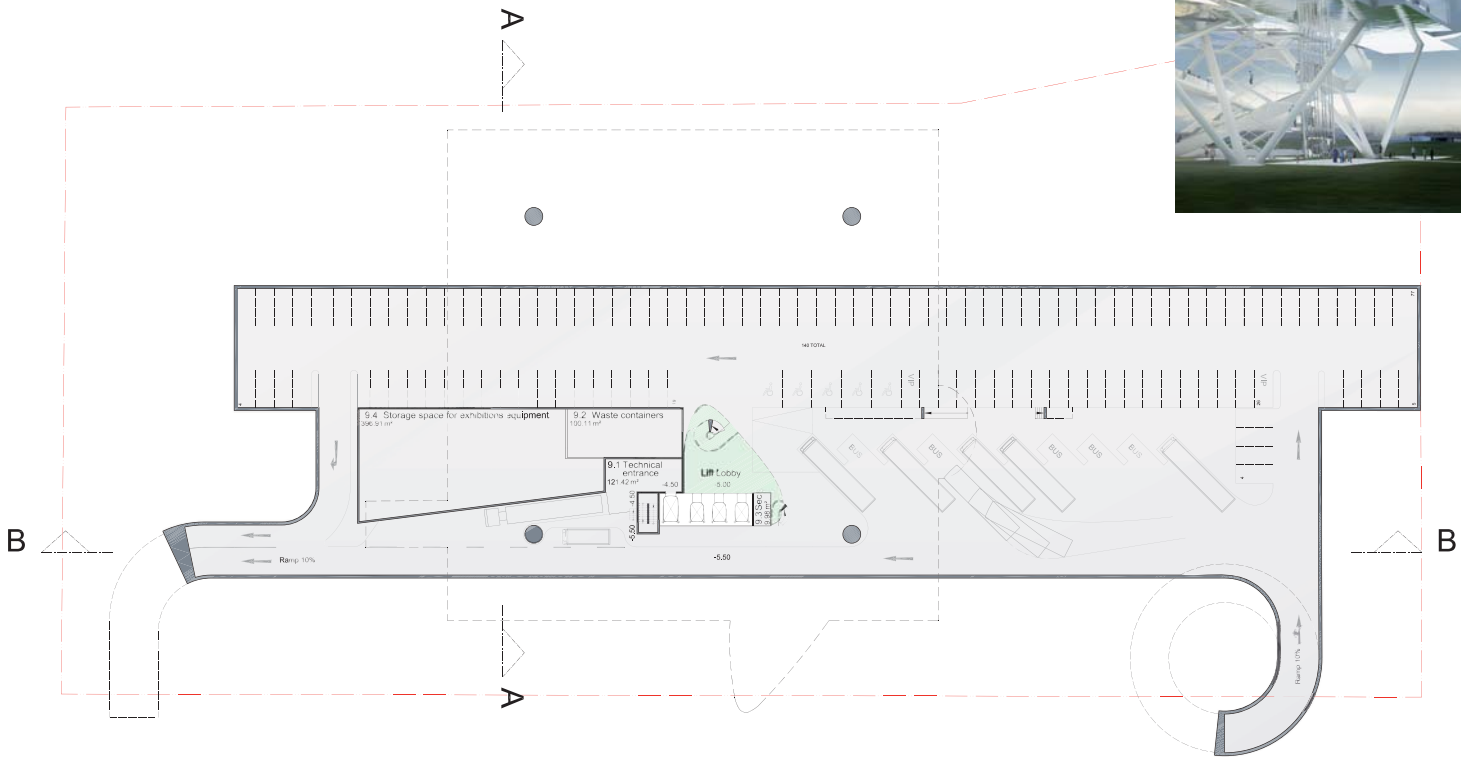


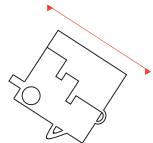
VIEW F3




PARKING GARAGE
120 CARS + 20 VIP
10 BUSES
LOADING/UNLOADING AREA
STORAGE

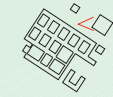

PLAN LEVEL -5.50 1:500





NORTH EAST
ELEVATION
1:200

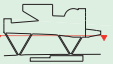


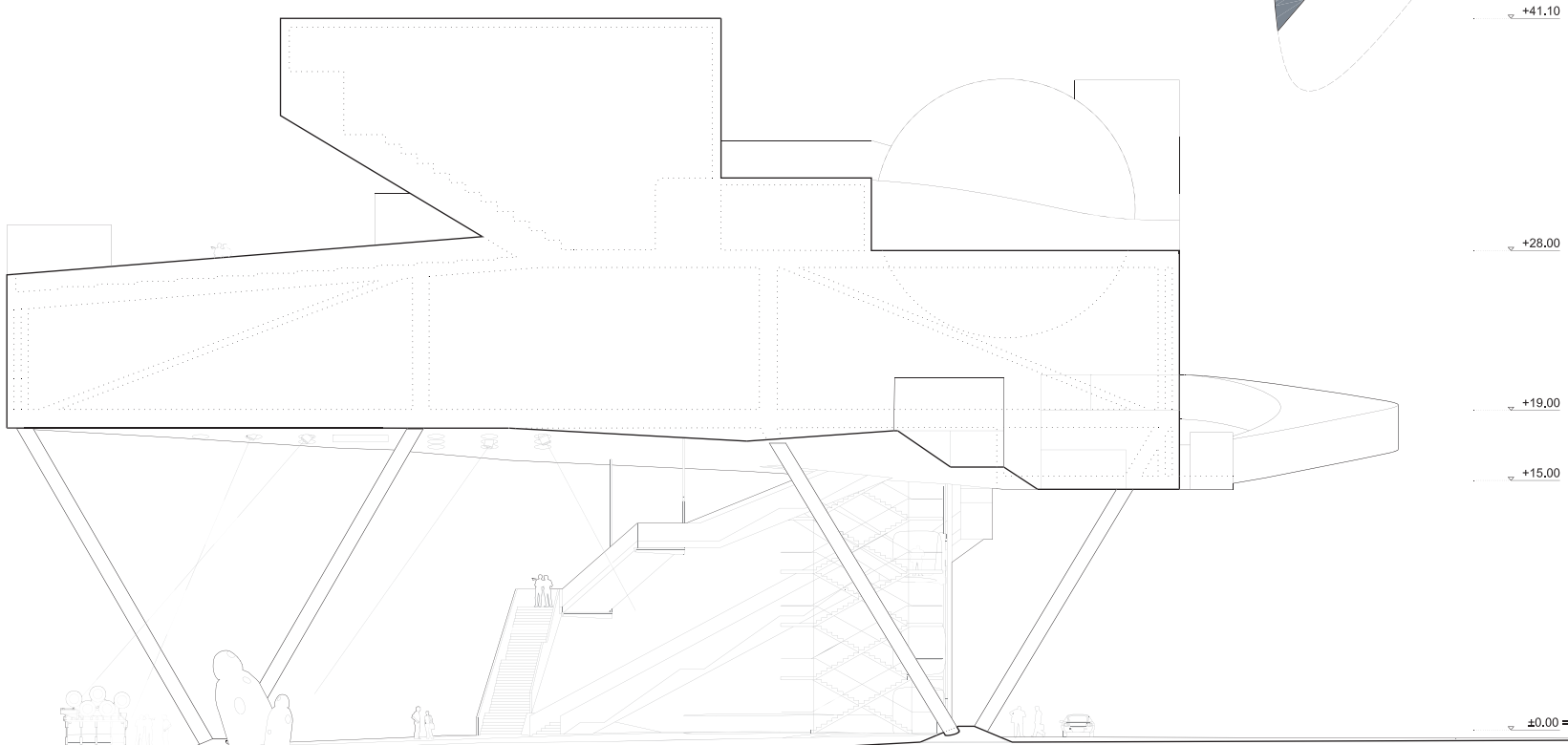
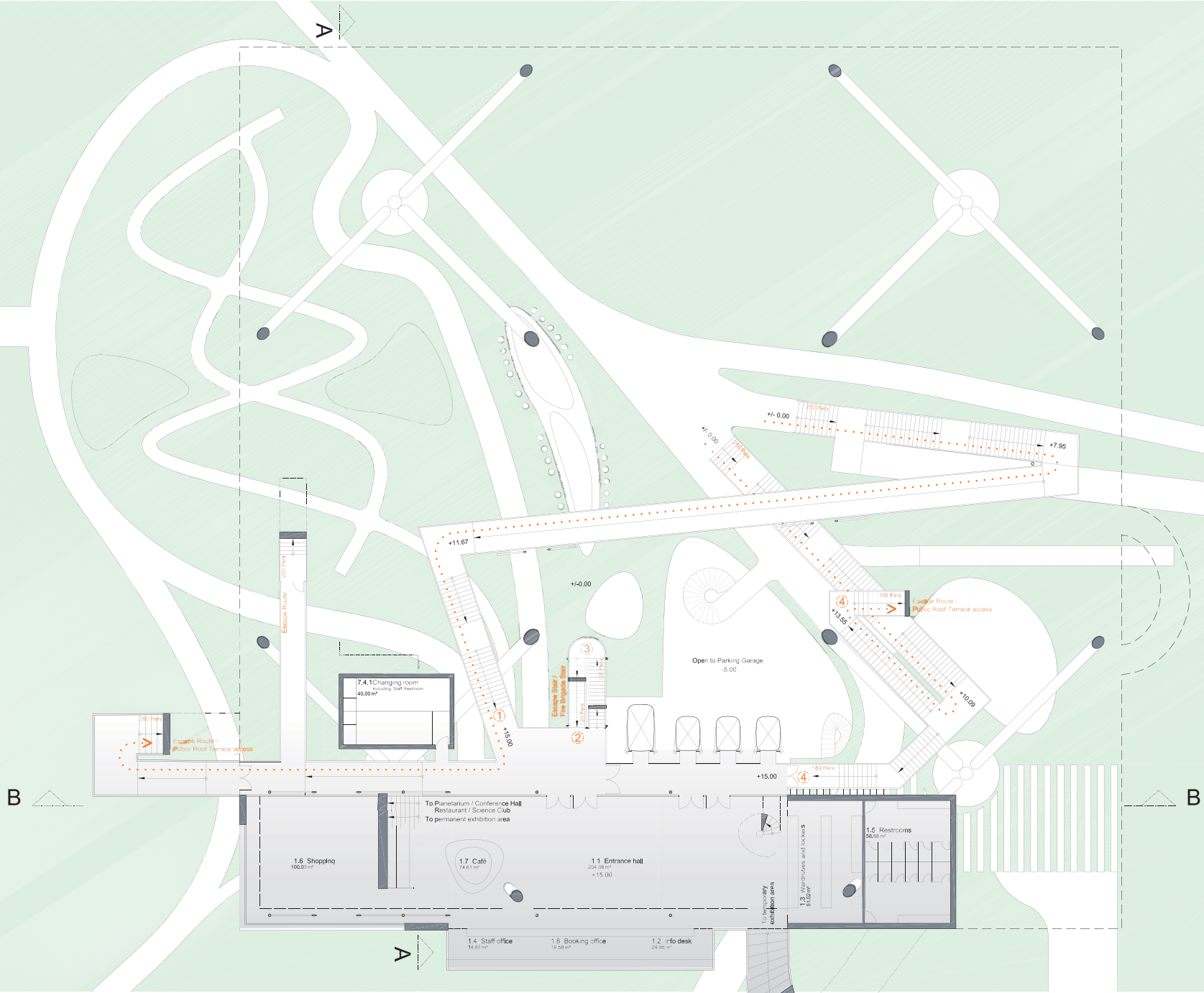
VIEW F4




①
280 Pers
ESCAPE ROUTE NUMBER
(DEDICATED NUMBER OF PEOPLE)

ENTRANCE HALL
SHOP
CAFE
STAFF OFFICE
BOOKING OFFICE
INFO DESK
LOCKERS, TOILETS
CHANGING ROOM STAFF

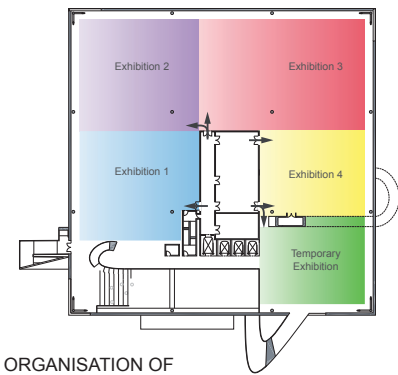
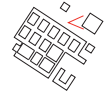

PLAN LEVEL +15.00 1:200




NORTH WEST
ELEVATION
1:200



VIEW F4 (detail)

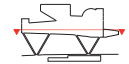


ORGANISATION OF EXHIBITION SPACES

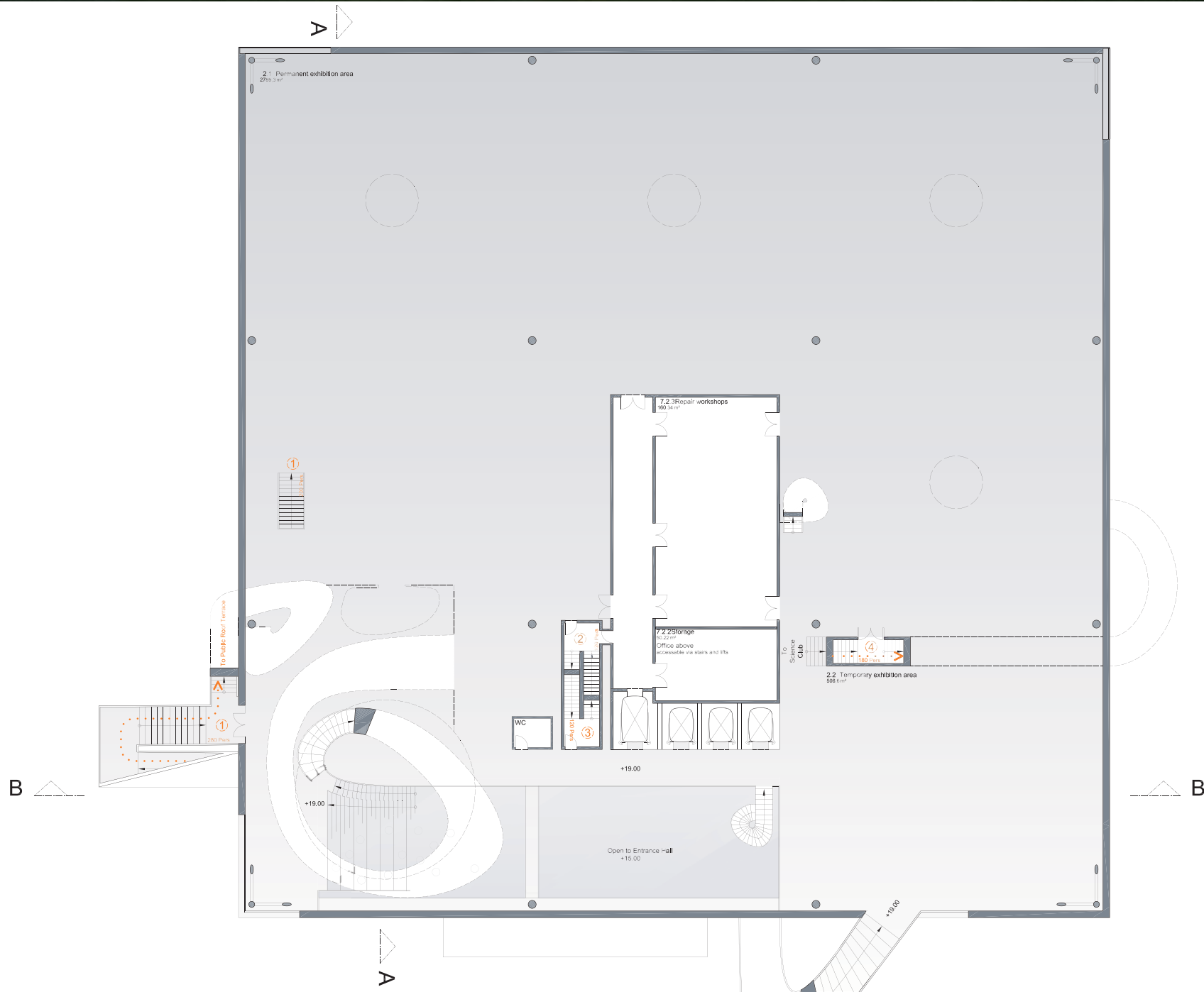


ESCAPE ROUTE NUMBER
(DEDICATED NUMBER OF PEOPLE)

PERMANENT EXHIBITION
TEMPORARY EXHIBITION
WORKSHOPS



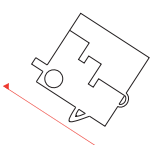
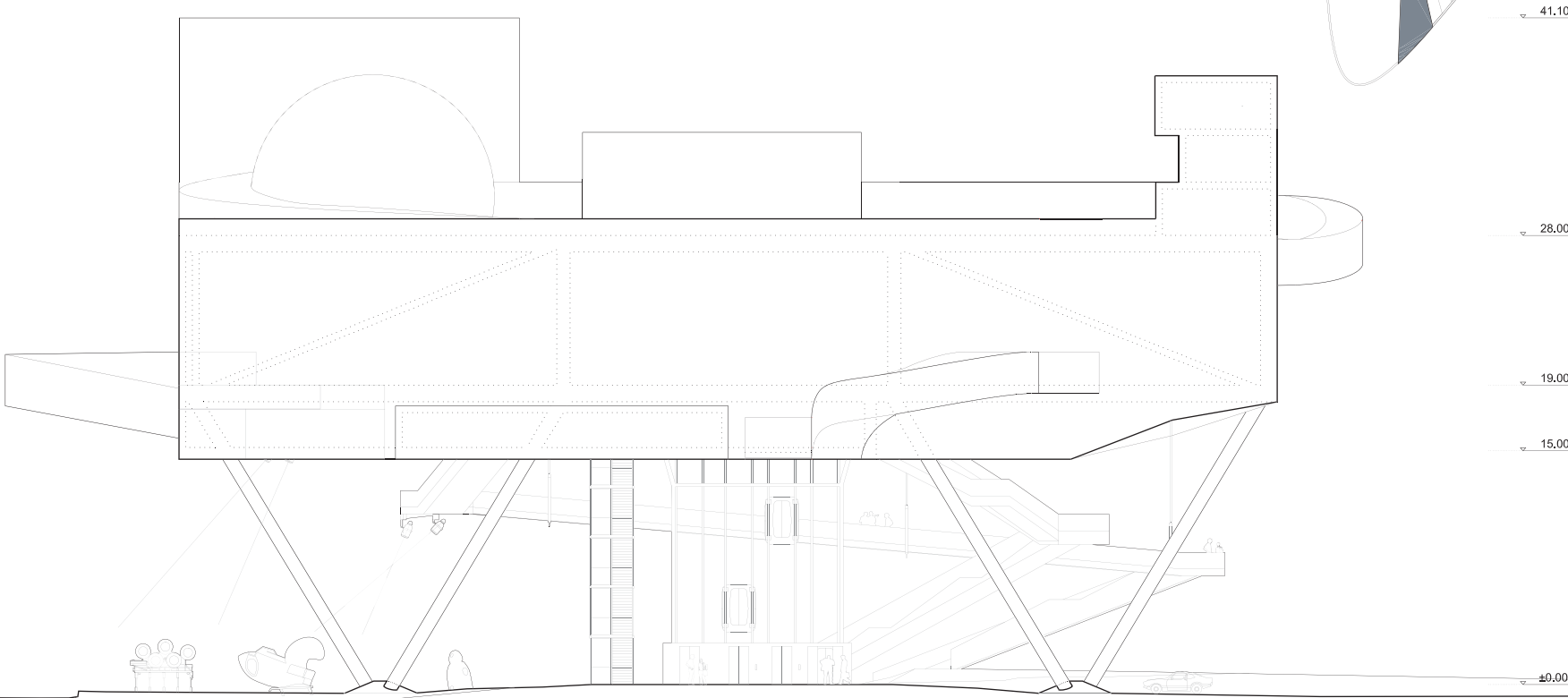
PLAN LEVEL +19.00 1:200



B

B

A



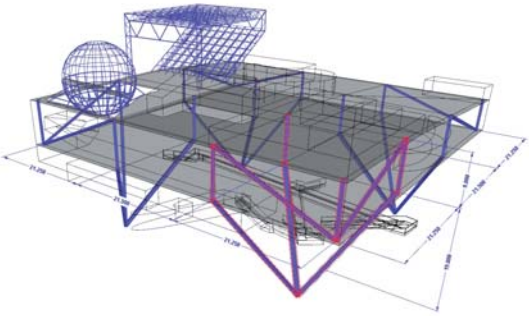
SOUTH WEST
ELEVATION
1:200

STRUCTURAL PRINCIPLES

The Centre for Promotion of Science is an elevated frame construction with pre-stressed bubble decks. These voided biaxial flat slabs are enabling wide spans without losing the benefits of concrete slabs. Compared to a solid slab the reduced amount of concrete leads to less accelerated seismic mass and reduced energy & carbon emissions.

Steel superstructure

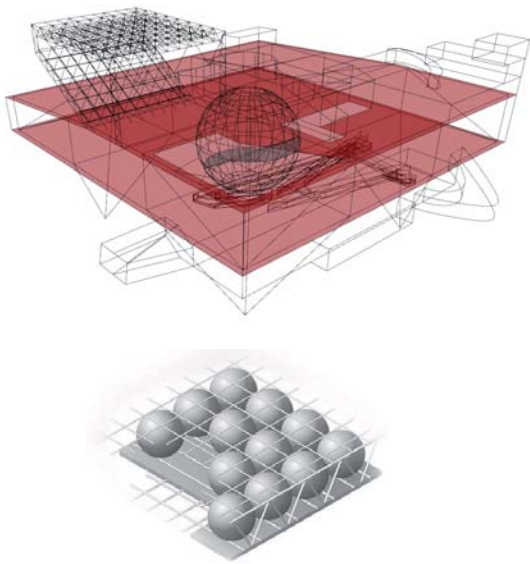
The obviously simple designed and therefore cost-efficient steel super-structure easily supports the centre complex without leading to seismic vulnerability. Auger piles or diaphragm walls are providing the bearings of the steel superstructure.



Bubble decks

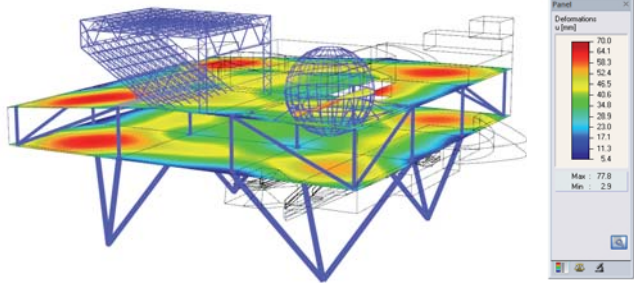
Flat concrete slab with void formers. Pre-stressed for optimal performance. $h = 750$ mm. Dead-load reduction of 30% compared to a solid concrete slab without losing fire- and sound-benefits.

Stairways an additional structures like the dome theater and the conference hall can be easily suspended respectively supported.



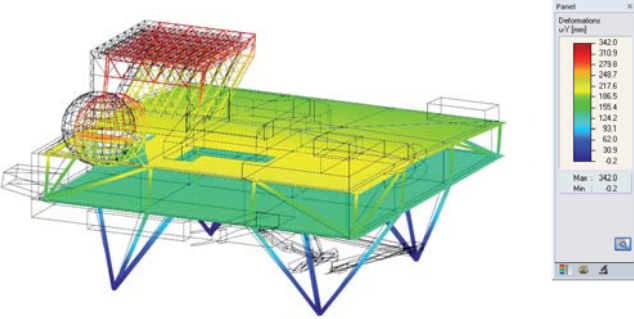
Deformations under quasi-permanent combination

The pre-stressed biaxial hollow deck shows an excellent displacement behaviour and is within the recommended range of the Eurocode.

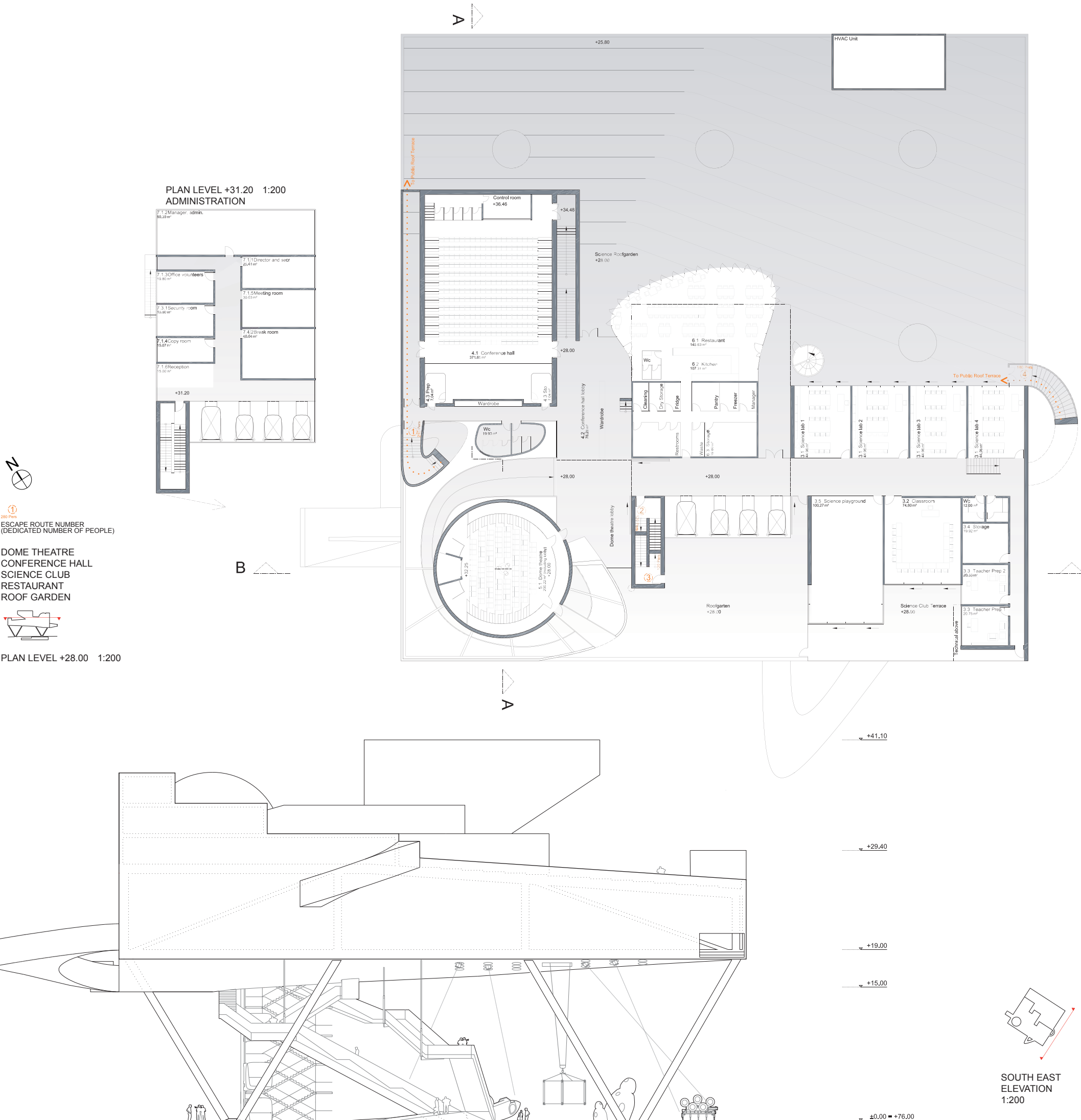


Deformations under seismic loads

Although the building is elevated, the supporting steel superstructure ensures good seismic behaviour. Additional bracings will enhance the behaviour of the dome theater and the conference hall.



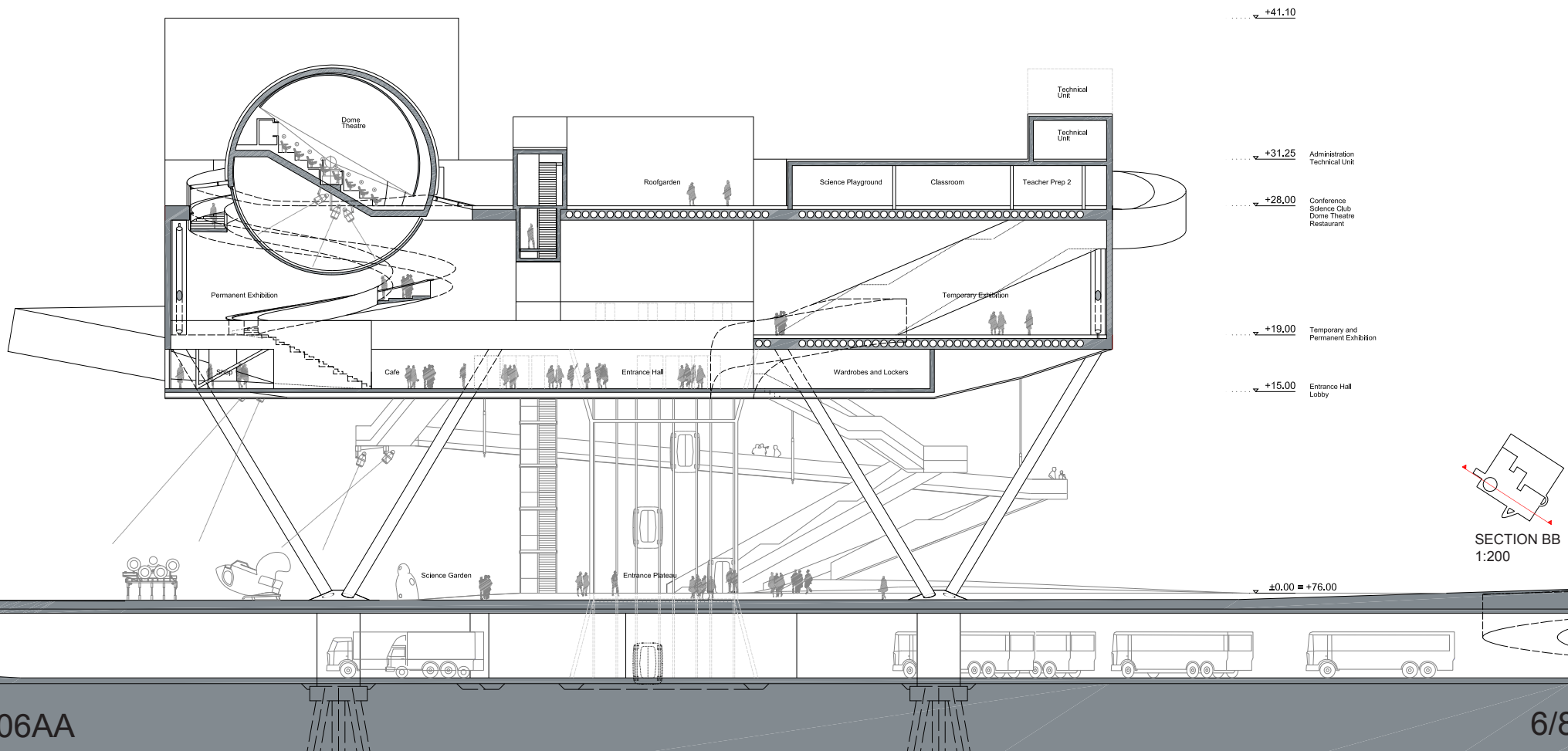
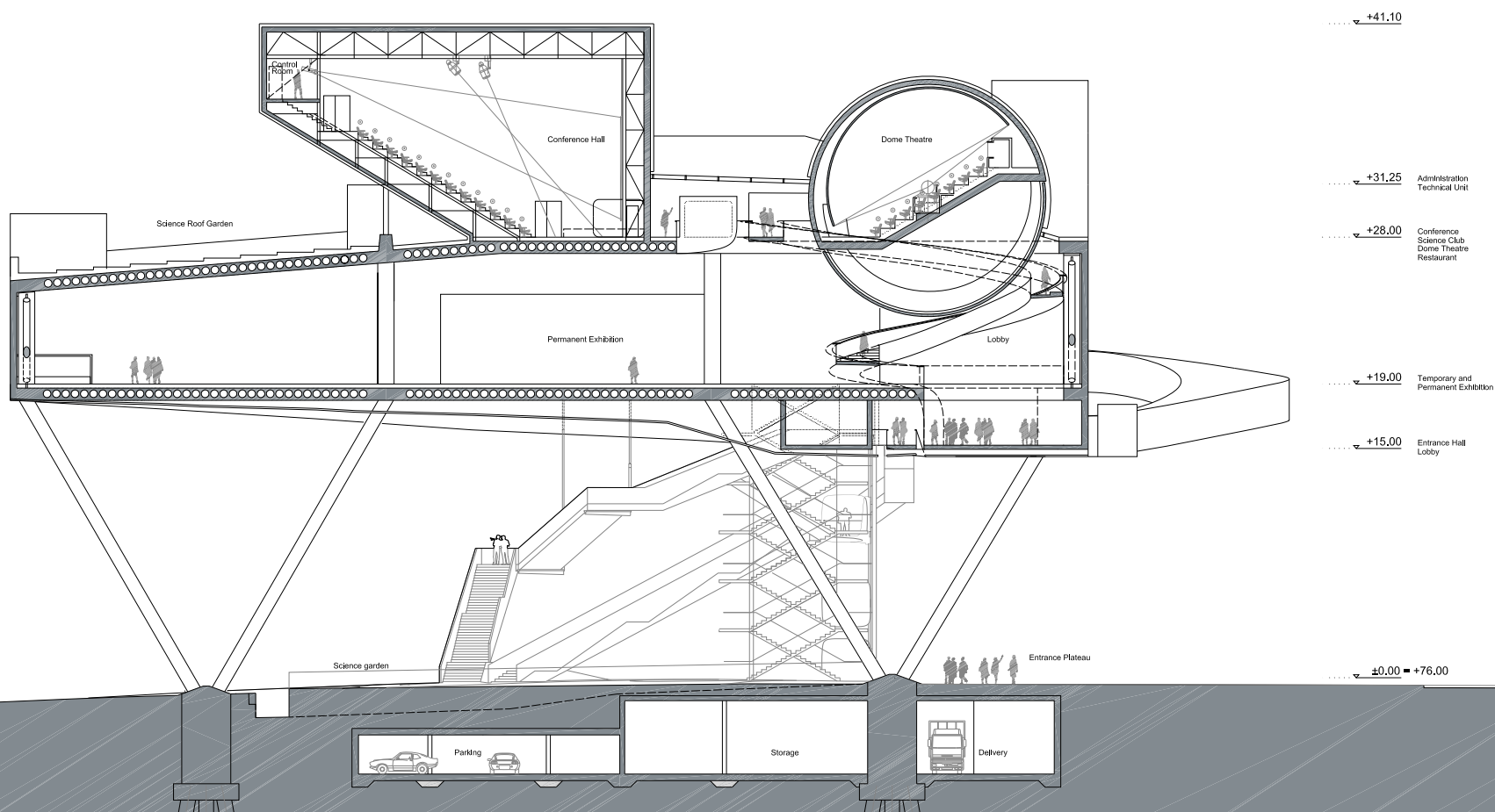
4 tripods: steel pipes $d = 800$ mm / $d = 1000$ mm
Main columns and struts between the slabs: steel pipes $d = 600$

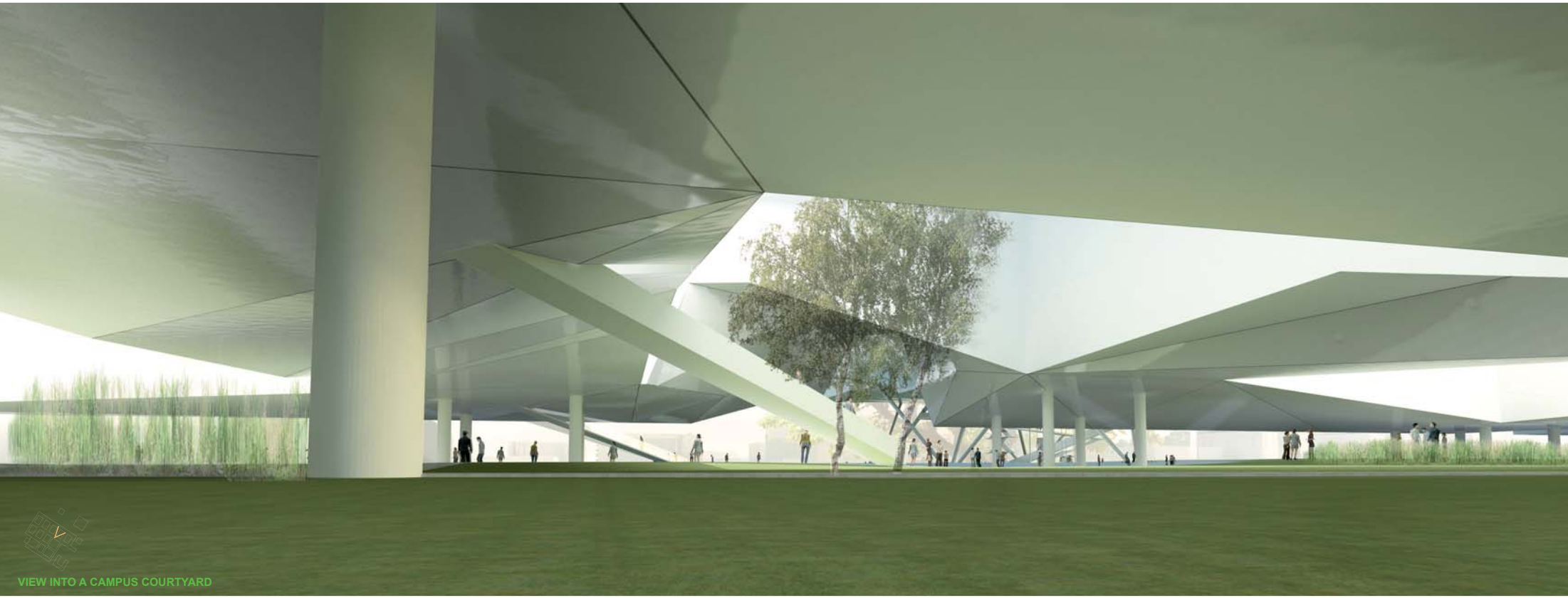




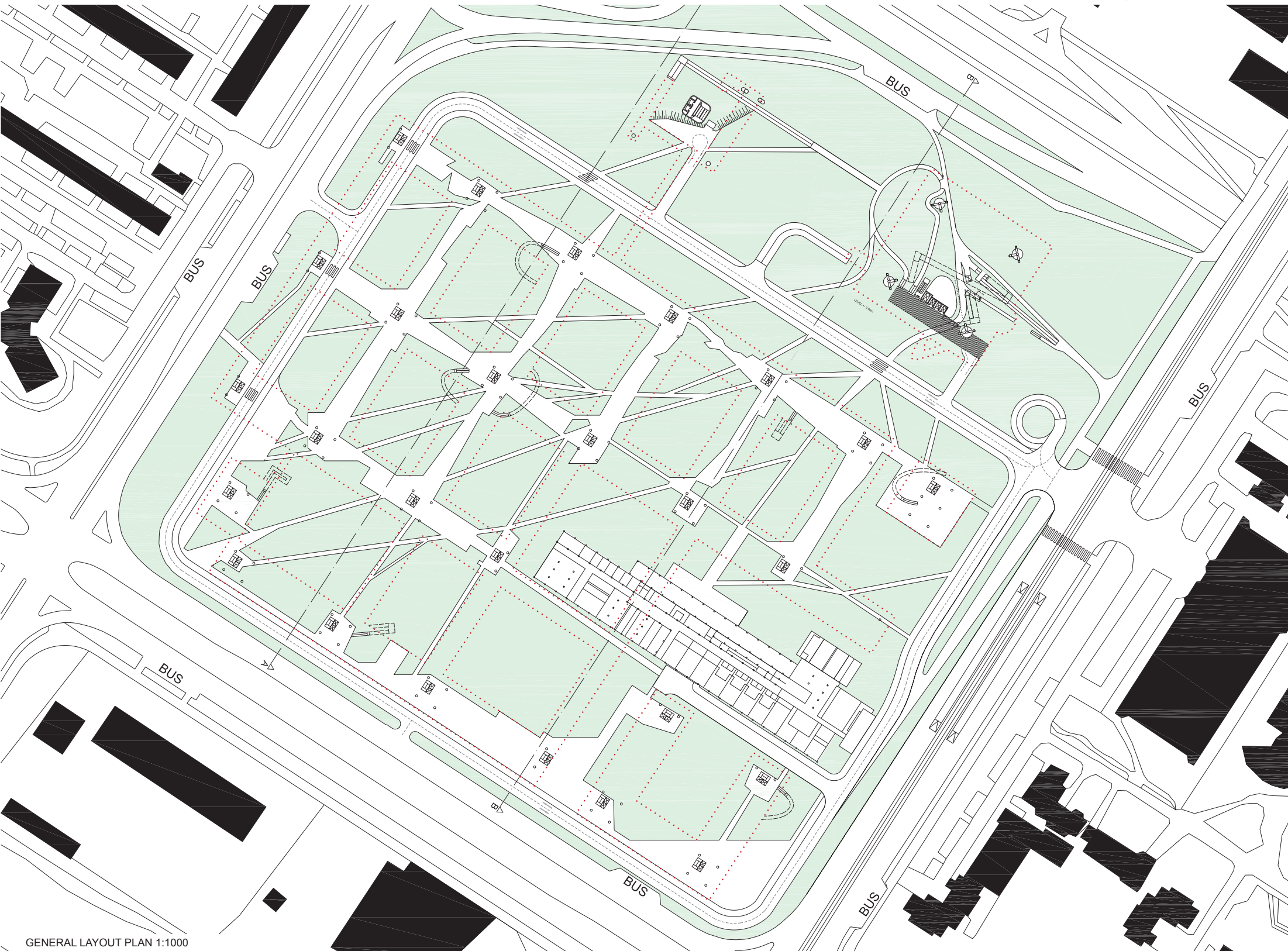
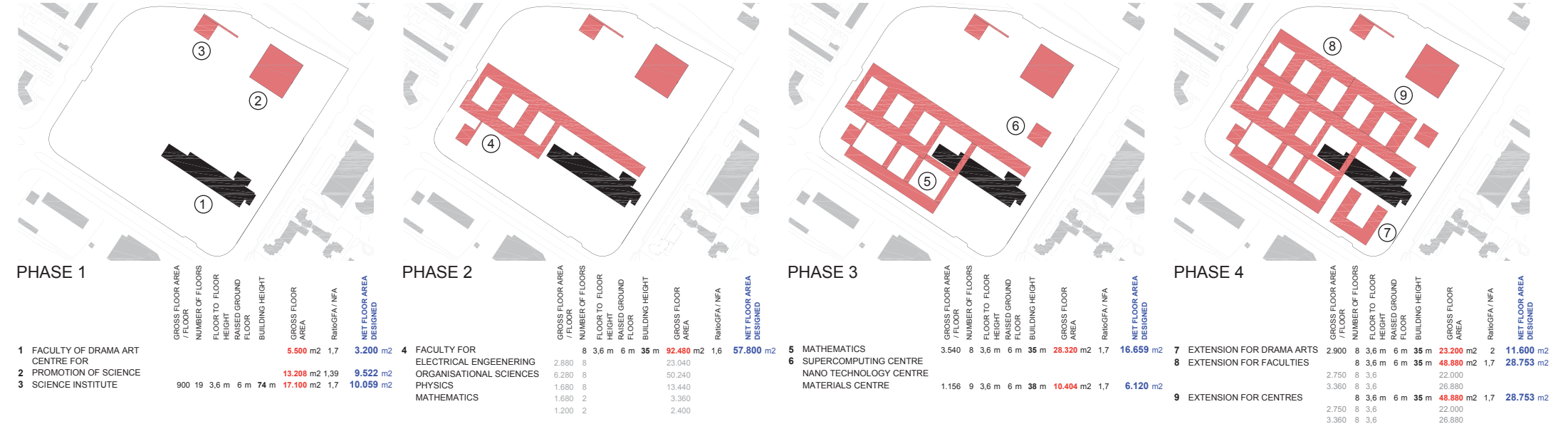
VIEW F5

- THE SURFACE OF THE CITY BELONGS TO EVERYBODY - - ALL BUILDINGS ARE RAISED AT LEAST 6M ABOVE GROUND - - BLOK 39 IS A CONTINUOUS UNBROKEN GARDEN SURFACE -

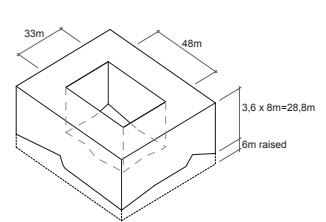
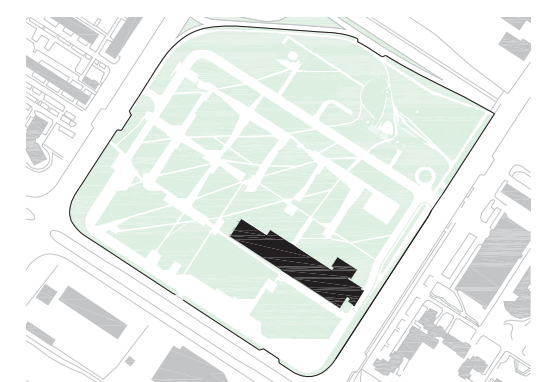
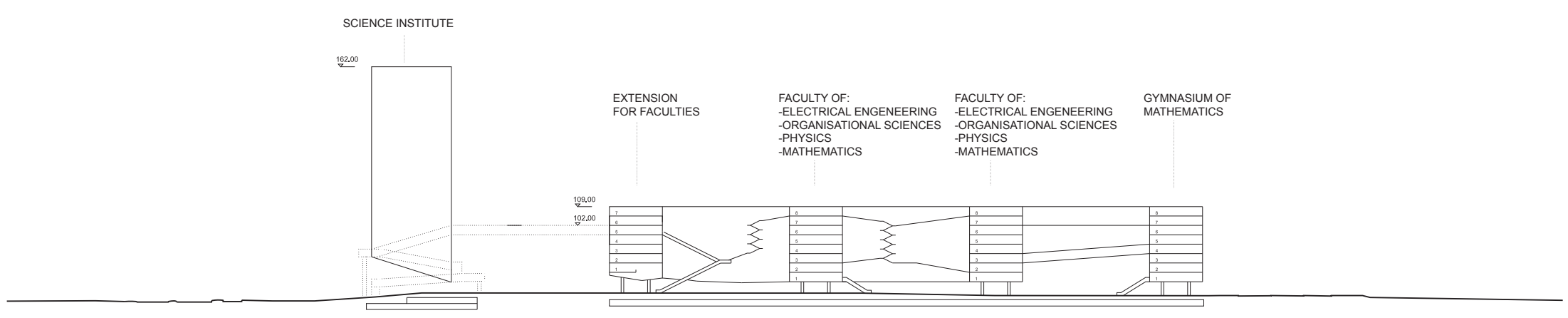




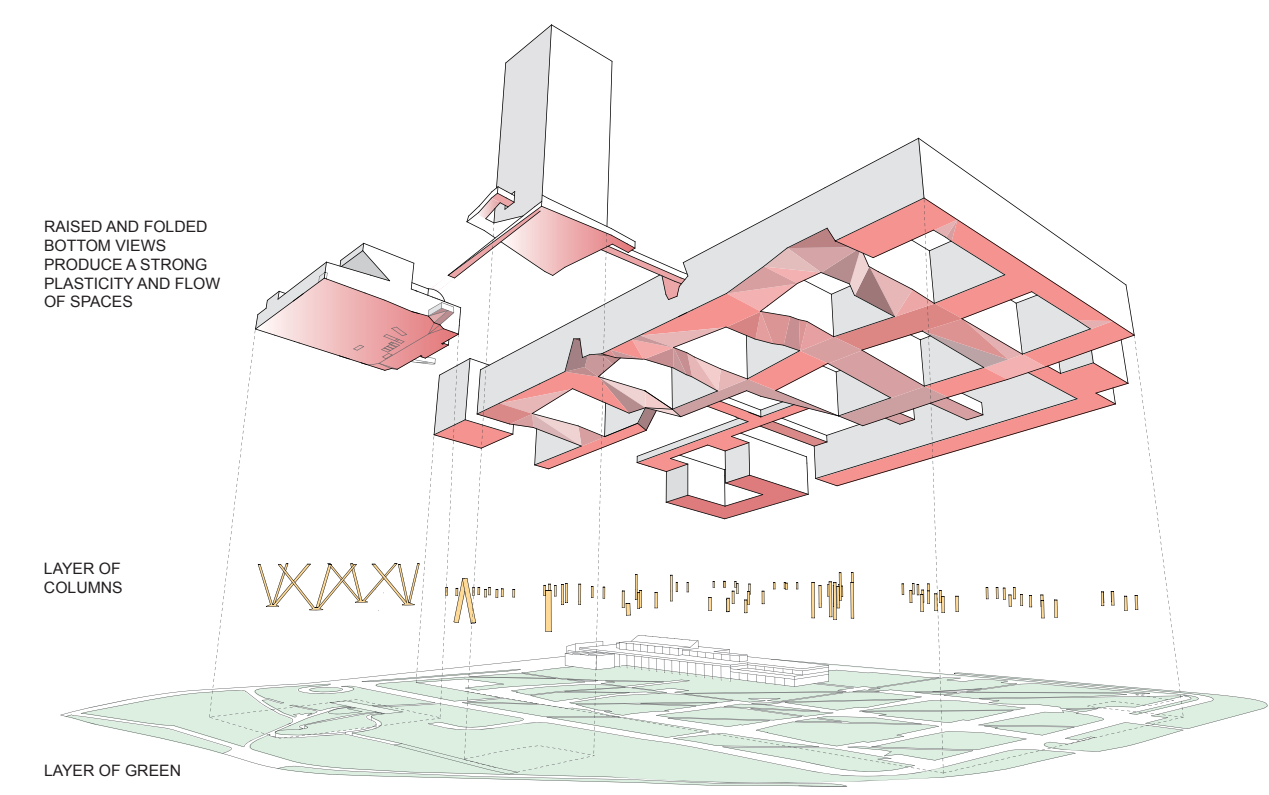
VIEW INTO A CAMPUS COURTYARD



GENERAL LAYOUT PLAN 1:1000



BASIC UNIT
RAISED COURTYARDS



- THE SURFACE OF THE CITY BELONGS TO EVERYBODY -
- ALL BUILDINGS ARE RAISED AT LEAST 6M ABOVE GROUND -
- BLOK 39 IS A CONTINUOUS UNBROKEN GARDEN SURFACE -

SCIENCE CAMPUS,
BELGRAD, 2010

