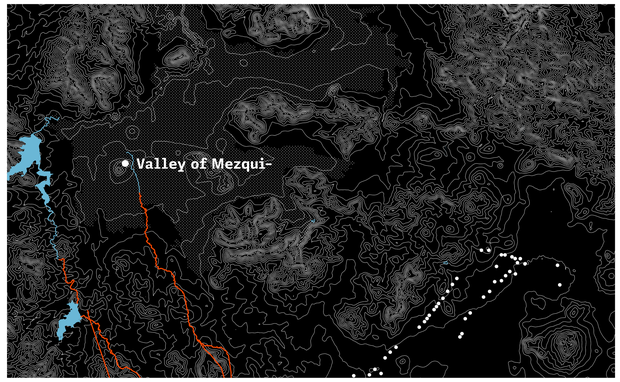
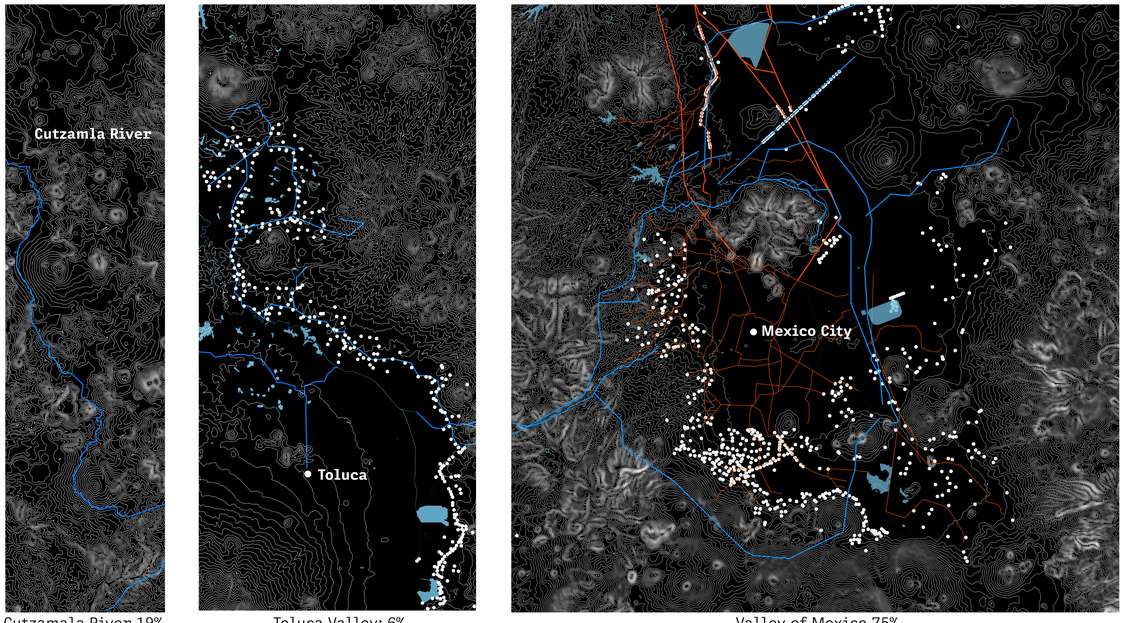
Modern Waters



11/89 %



Cutzamala River 19%

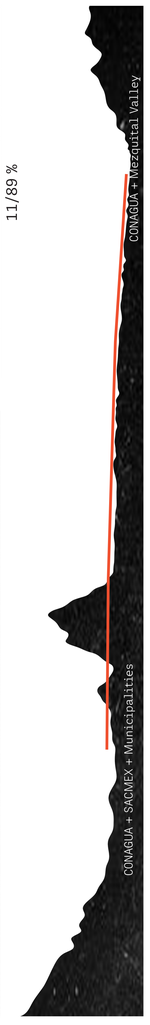
Toluca Valley: 6%

Valley of Mexico 75%



SUPPLY

USE



DISPOSAL

Partial Treatment



food supply
destablizaton



aquifer
overexploitation



xochimilco lake
contamination



environmental
destruction
endagering ind.
livlihoods



aquifer
overexploitation



sinking



drought



flooding



politcal exploitation

MODERN WATERSCAPE

Ejido Water Territory

Ejido Territories

Water Recipients

Glaciar fed water

Hydro-Social Relations

Commissariat

President

Treasurer

Secretary

Supervisors

Ejido Assembly

supply & maintanance

Infrastructre

THE EJIDO CASE STUDY



Independently constructed water infrastructure



Ejido Assembly

VERNECULAR PATIO STUDY



Patio typology in CDMX and Oaxaca

VERNECULAR FIELD STUDIES

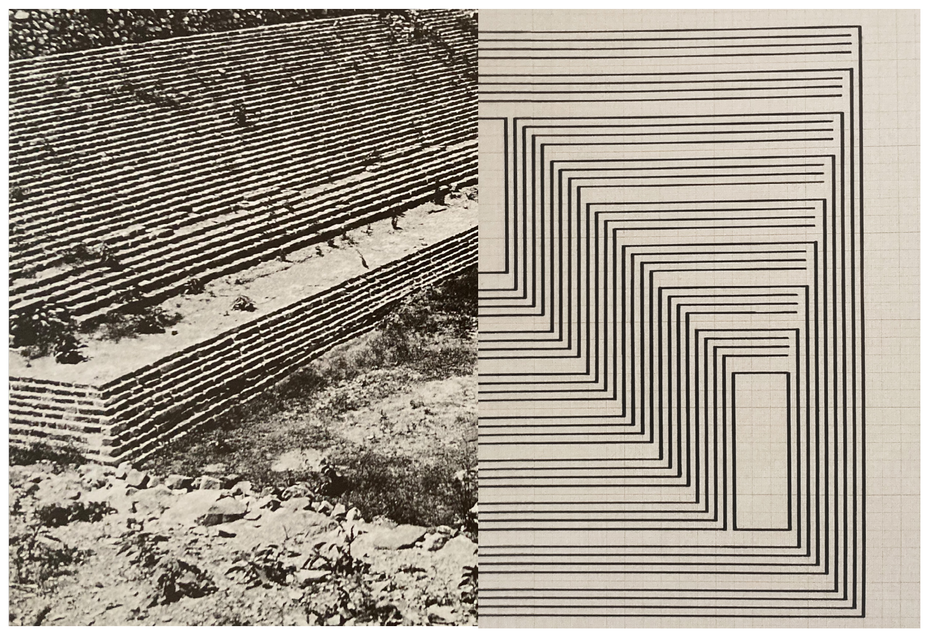


Domestic Housing - Monte Alban



Facade Decoration - Uxmala

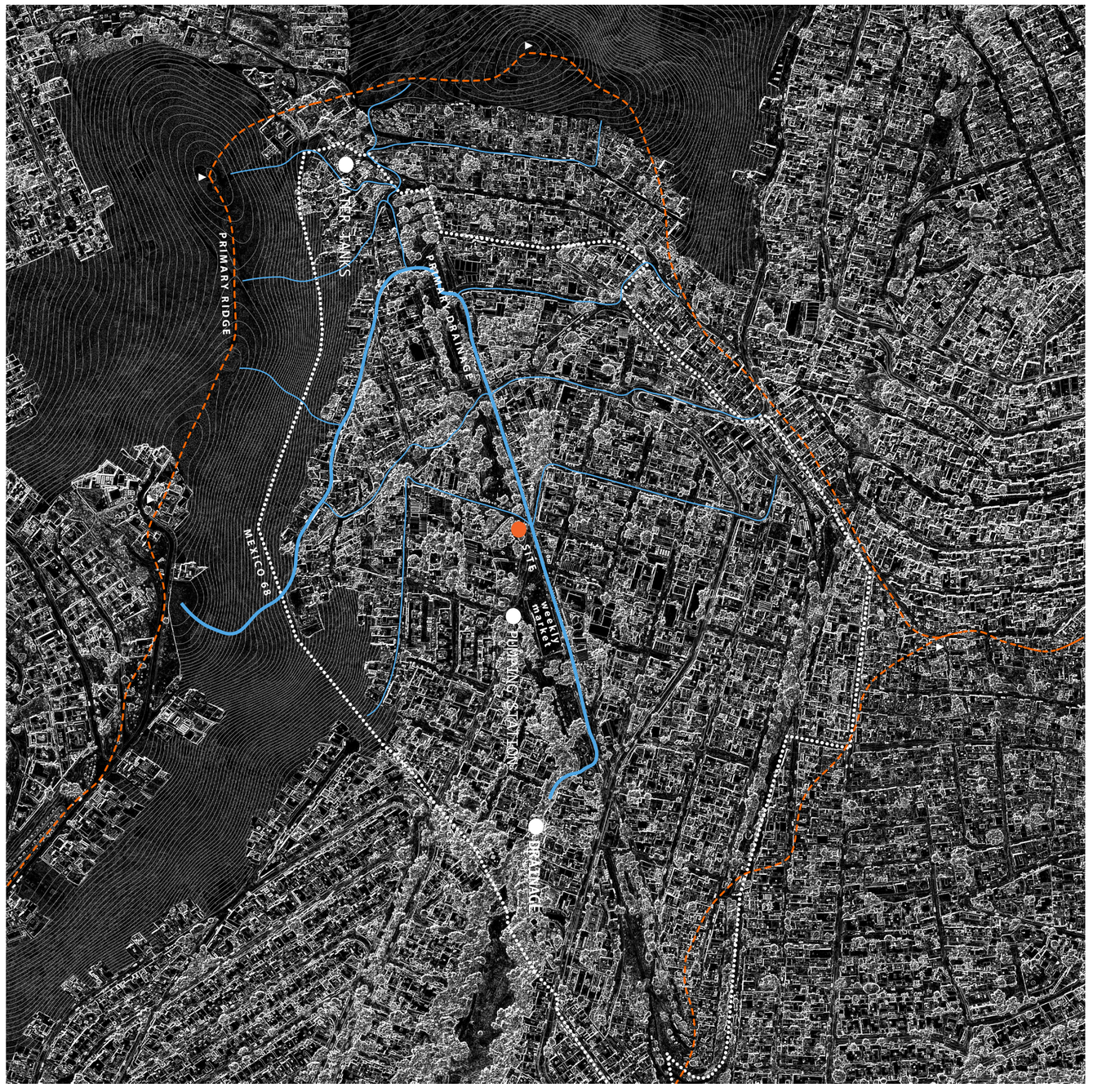
ARTISTIC AND ARCHITECTURAL INTERPRETATIONS



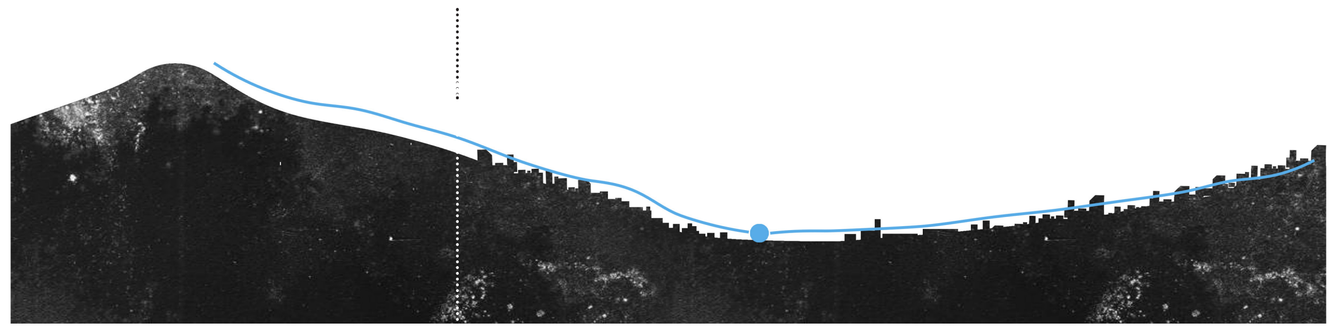
Cancha del Juego de la Pelota- Monte Alban + Joseph Albers



KEYLINE WATERSHED ANALYSIS

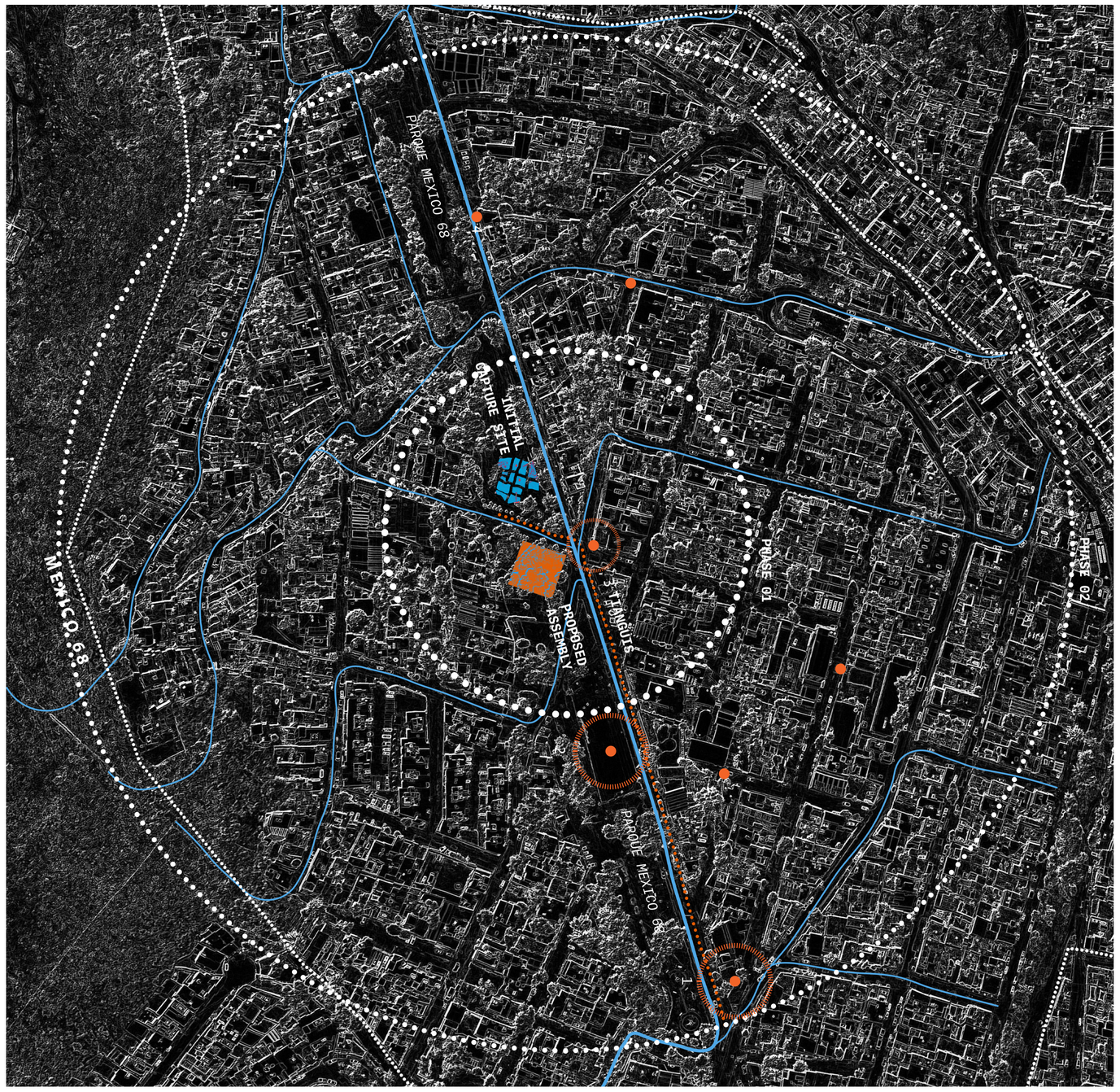


WATERSHED SOUTH WEST			
Mountains: 90.000 m²			
Streets: 61.000 m²			
RUNOFF COEFFICIENT	PRECIPITATION RATE	PRECIPITATION TOTAL	COVERAGE
0,7	972 mm/m²y	60000000 l	
0,95-0,9	972 mm/m²y	56000000 l	93%
		12000000 l	



MOUNTAINS STREETS KEYLINE

THE INTERSECTION OF WATER AND PEOPLE





1 church de la Guadalupe



2 basketball court



3 kindergarden



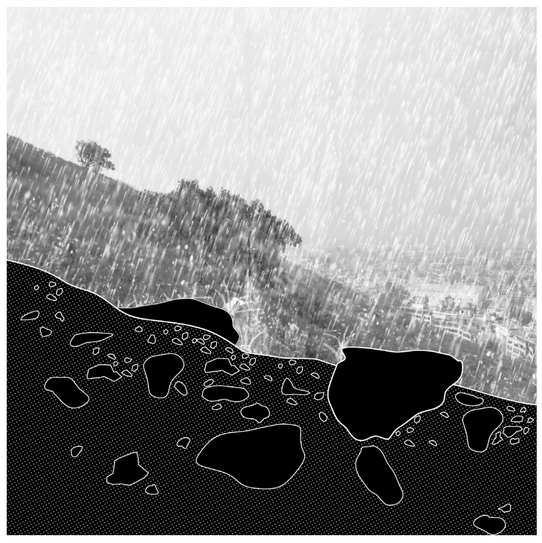
4 tianguis

URBAN RUNOFF

EXISTING

ADAPTED

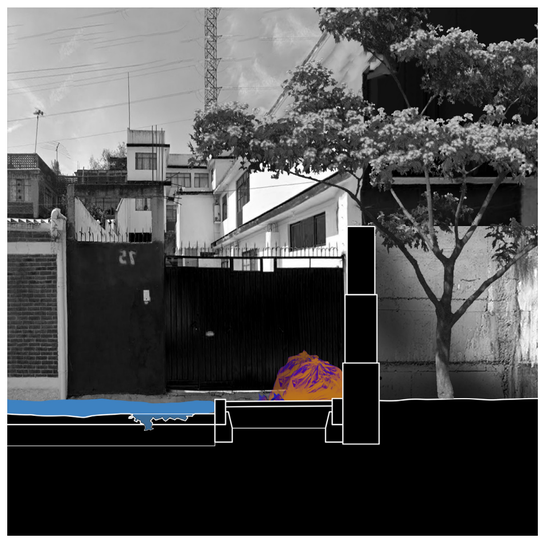
hilltops



hilltops

deforestation lowered water absorption

streets

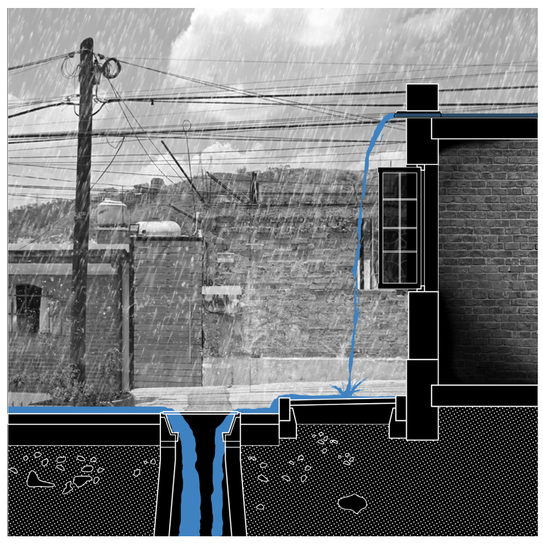


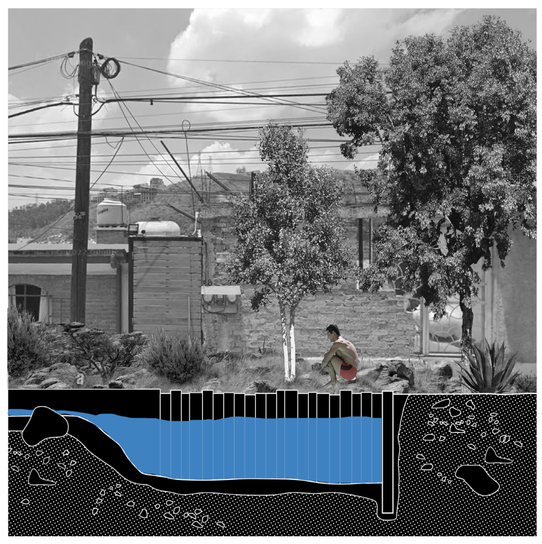


streets

bioswale implementation negates contamination

drainage



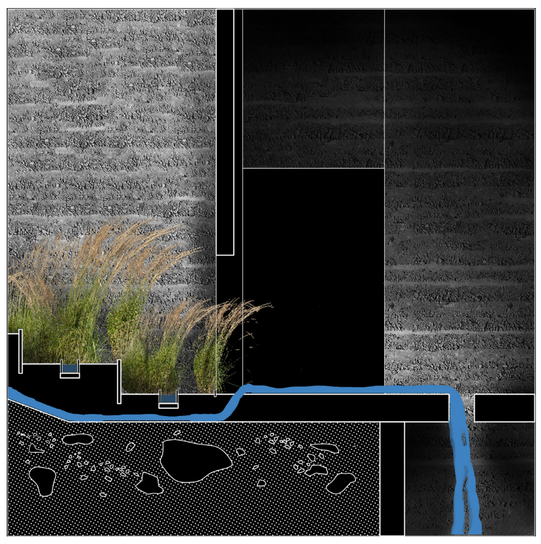


streets

system of water storages as blue green parks

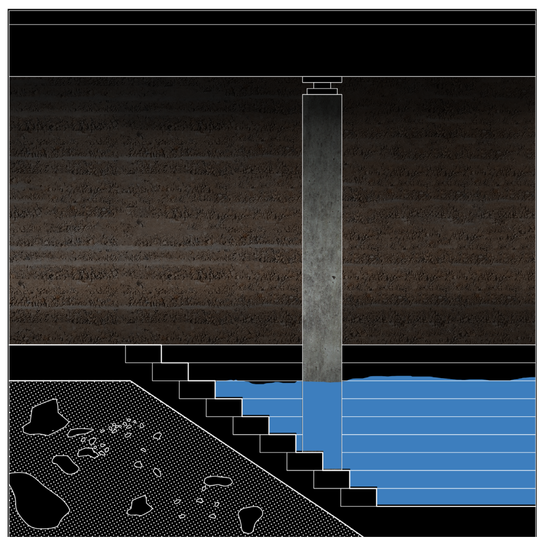
drainage

as runoff enters drainage mixes with black water (unsuable)



constructed wetlands

clean water + productive greenspaces



cistern

buffer cleaned water



underground aquifer | distributer + c. wetlands | canals | stone filtration | inverted chinampa | street bioswales | hillslopes

STORAGE | INFILTRATION | FILTRATION | STORAGE | CAPTURE

A WATERSHED STORY

URBAN RUNOFF

SITE

BUILDING

ENCLOSURE

UNDERGROUND

TINAGUIS

UNDERGORUND LINE

BIOSWALE

ENTRANCE

OFFICE

TOILET

ENTRANCE
CISTERN

WORKSHOP

CISTERN

EVENTSPACE

TEMAZCAL

ASSEMBLY
115 people

CONSTRUCTED WETLANDS
225M²

two streams

OVERFLOW

DAM
BUILDING

INVERTED
CHINAMPAS

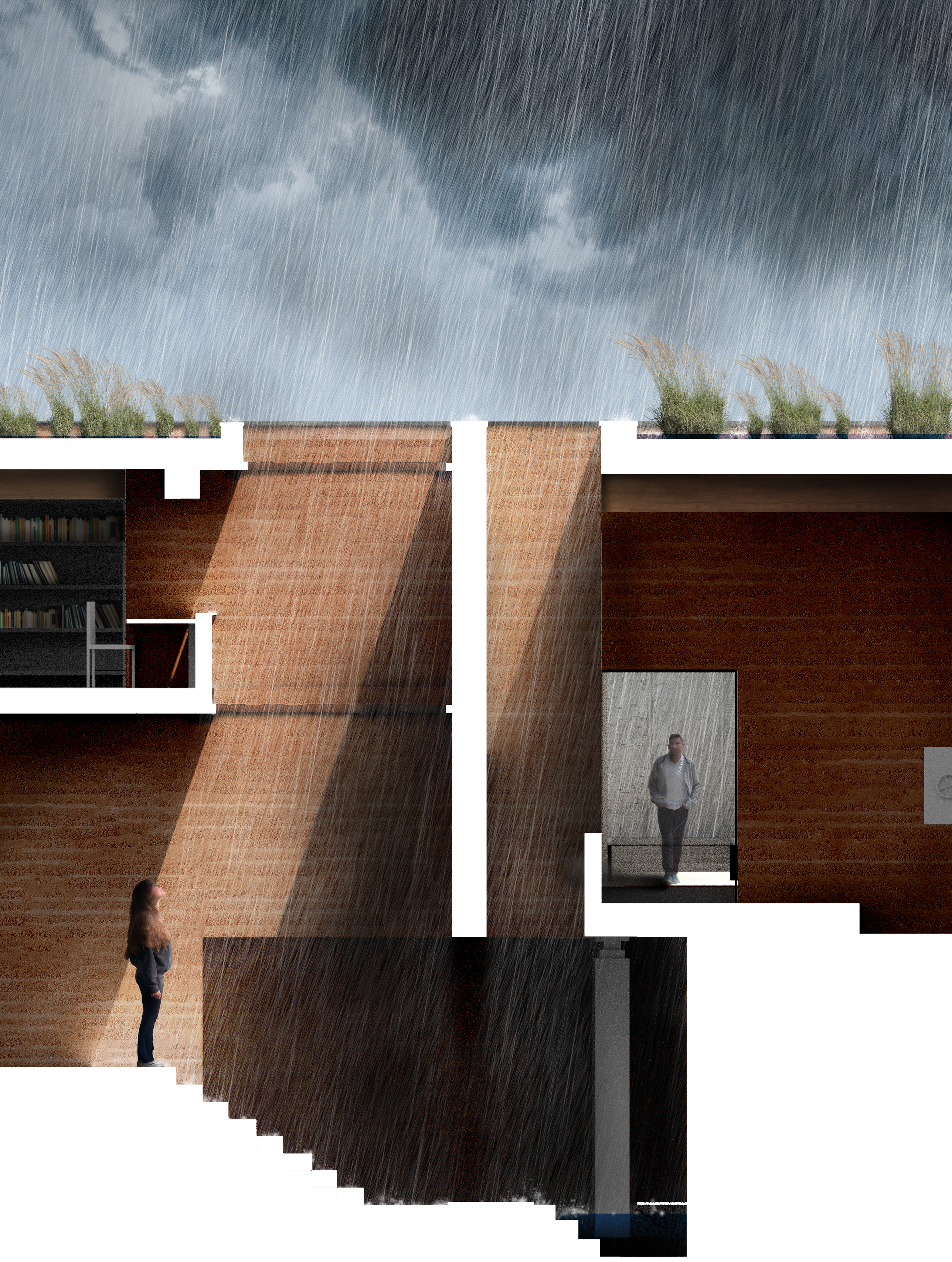
SITEPLAN | FLOORPLAN
scale 1:75

1 aquaduct
2 constructed wetlands
3 waterpath
4 water spout
5 workshop
6 cistern
7 constructed wetroof

SECTION WETLAND & CISTERN
scale 1:50

1 constructed wetroof
2 cistern
3 workshop
4 constructed wetroofs
5 office
6 library
7 entrance

SECTION ENTRANCE & WORKSHOP
scale 1:50



WATER SPOUTER
scale 1:20

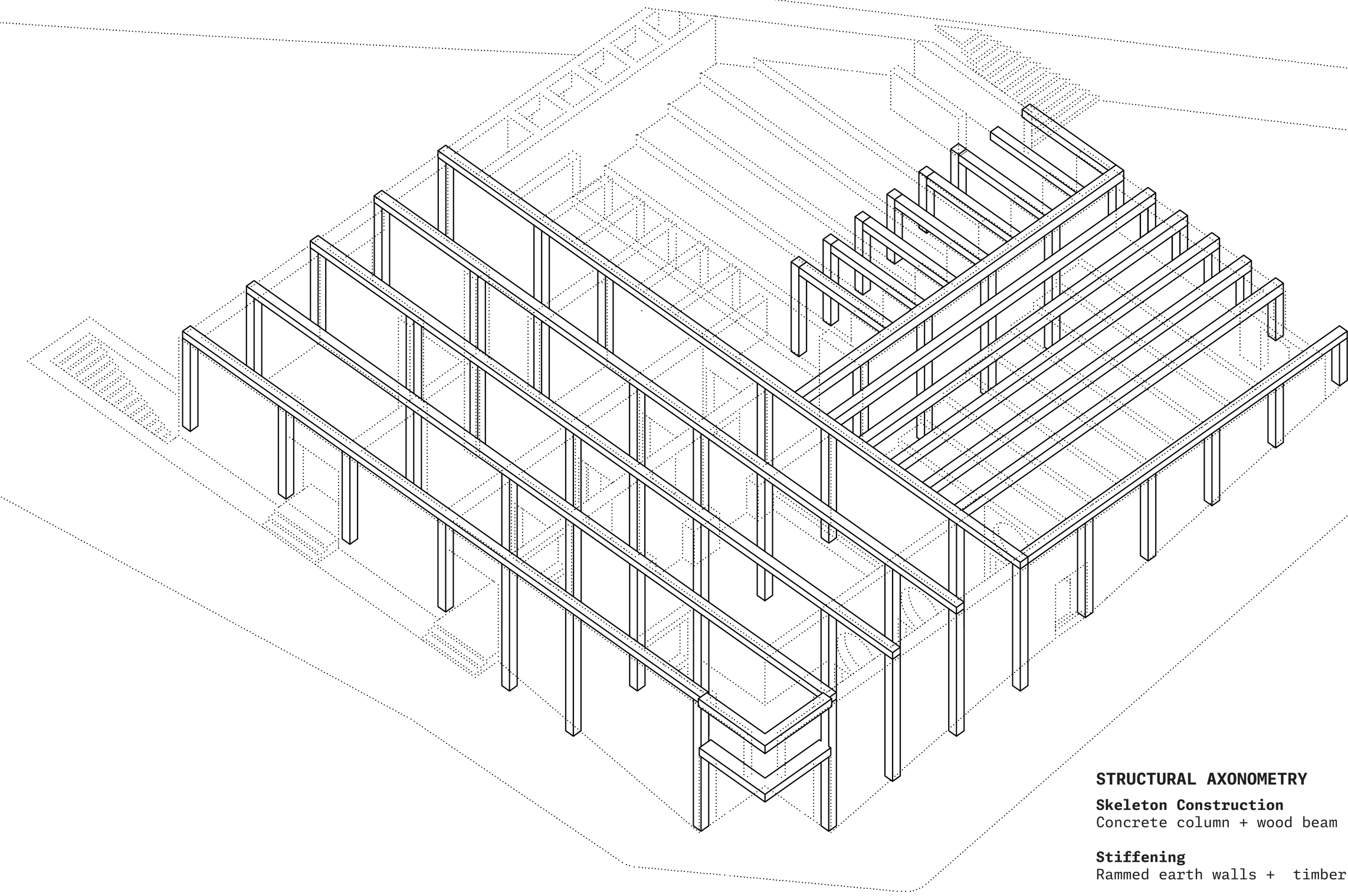
ENTRANCE PERSPECTIVE



DAM AQUADUCT VIEW AXIS



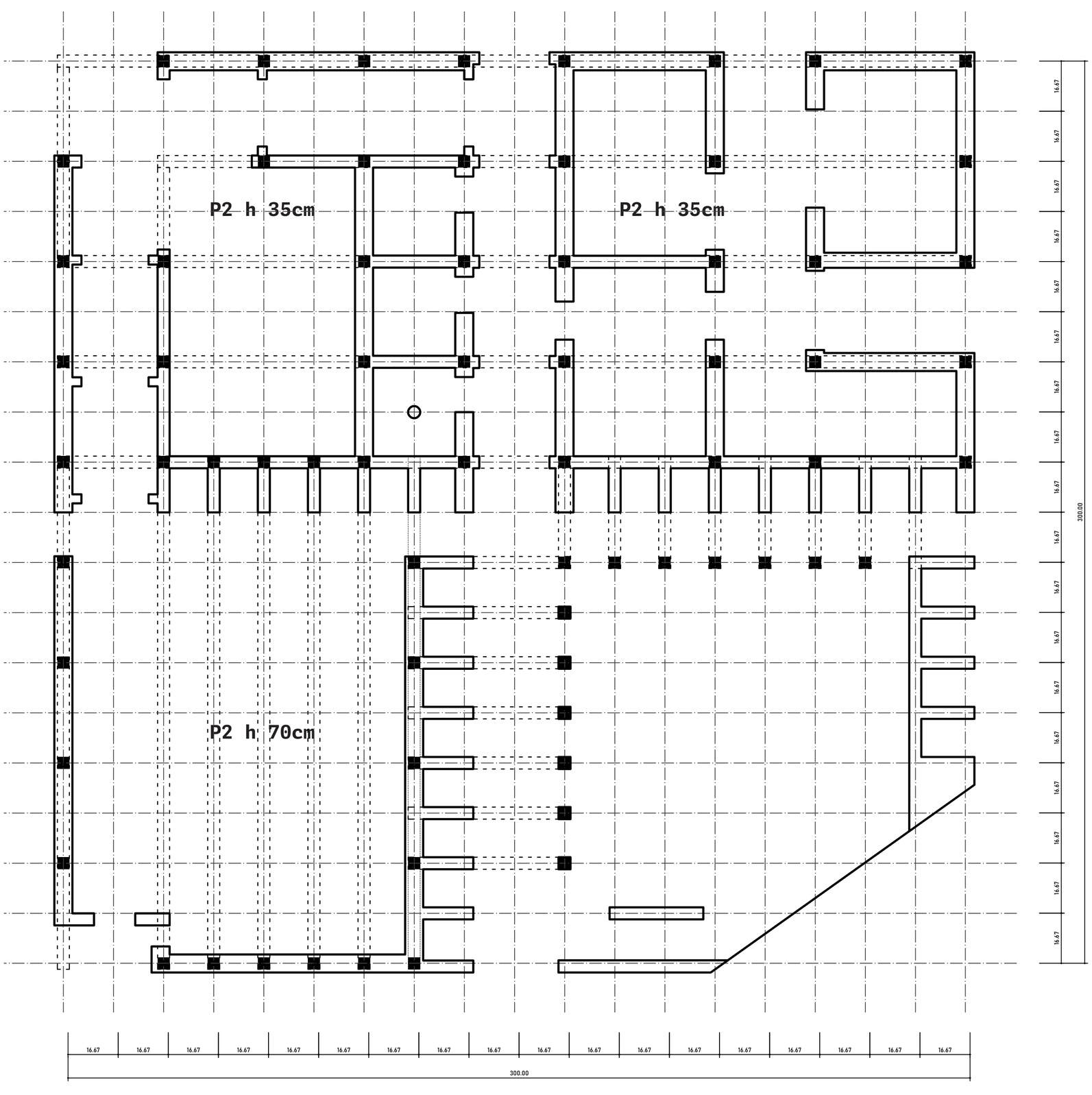
WETLAND PATIO



STRUCTURAL AXONOMETRY

Skeleton Construction
Concrete column + wood beam

Stiffening
Rammed earth walls + timber stack ceiling


P2 h 35cm
P2 h 35cm
P2 h 70cm
16.67
16.67
16.67

FACADE SECTION 1:10

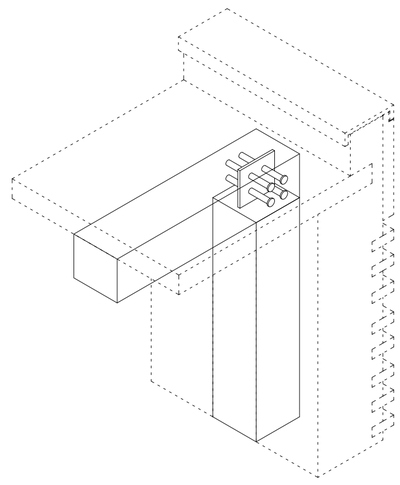
01 Concrete Crest + atticka cover

02 Overflow pipe

03 CEILING STRUCTURE - CW

Substrate matting (3cm)
OSB board + bitumen sealing 2.5 cm
Cork-grit-grass-loam sloping layer 0-7,5 cm
Stacked wood slab 15 cm
Wood beam 35 cm

04 Connection concrete column & wooden beam



05 WALL STRUCTURE

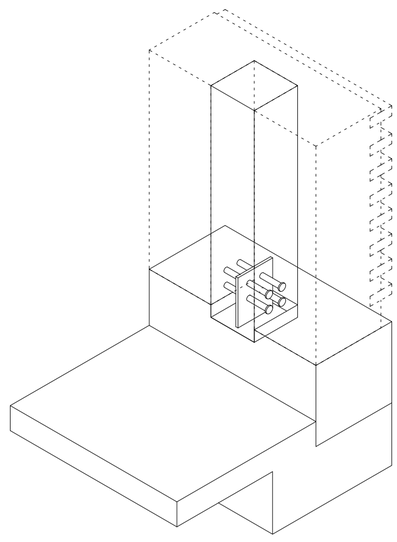
rammed earth 60 cm
lime mortar
integrated bricks 20cm (10cm exposed)

06 Reinforced Trass limestone lintel

07 Window + Cortensteel shutter

08 Corten steel window sill

09 Connection concrete column & wooden beam



future adaptations

la semilla

FROM SEED TO SYSTEM

ROOT SYSTEM

BIOSWALE

