Céline Carrière

Projet de Master
Juillet 2022

pérégrination aquatique sur trois lieux

ALBA MARINA / LA BAIGNADE

Sous la direction de:

Prof. Jo Taillieu
Prof. Nicola Braghieri
Axel Chevroulet

Ecole polytechnique féderale de lausanne / 07.2022

Céline Carrière

Enoncé théorique de master
SAR EPFL
Janvier 2022

rencontre de l'habitat avec l'eau;

étude topologique du seuil

Sous la direction de:

Prof. Nicola Braghieri
Prof. Jo Taillieu
Axel Chevroulet

Ecole polytechnique féderale de lausanne / 01.2022

prologue 11

chapitre premier;
approche

α aquatique 13

β phénoménologique 17

γ topologique 23

chapitre secondaire;
contexte

δ architecture anonyme 26

ε le détail 33

ζ l'habitat 36

η le seuil 40

chapitre tertiaire;
atlas

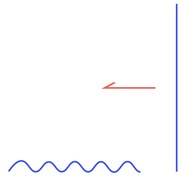
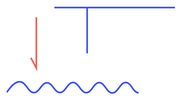
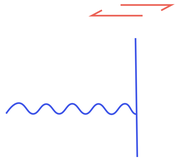
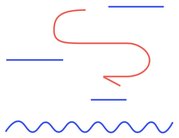
θ Regarder 50

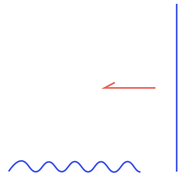
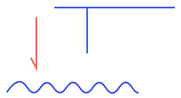
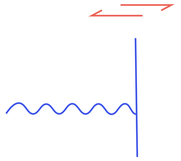
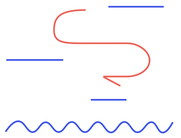
ι Surplomber 58

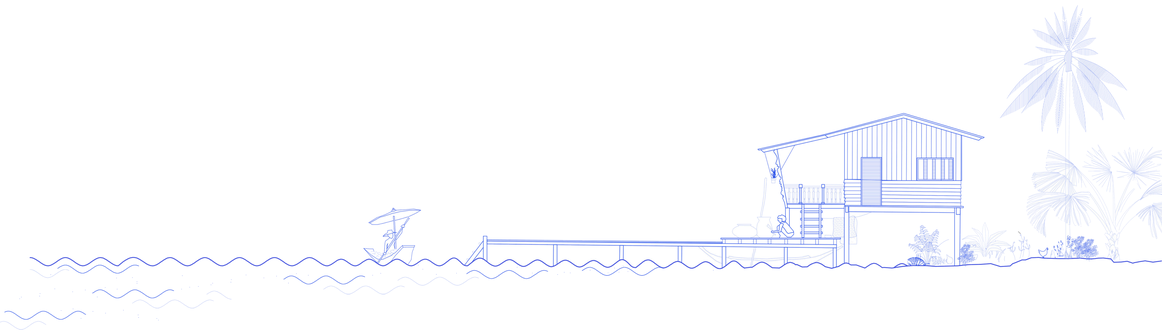
κ Accoler 70

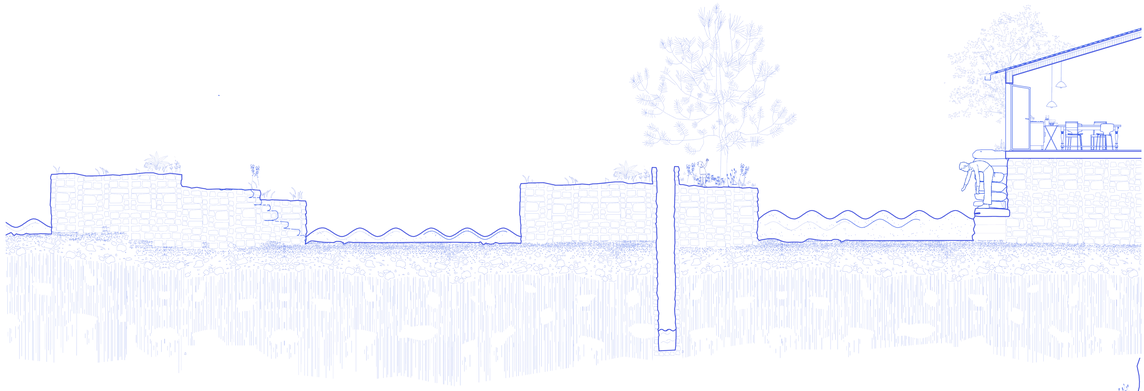
λ Parcourir 78

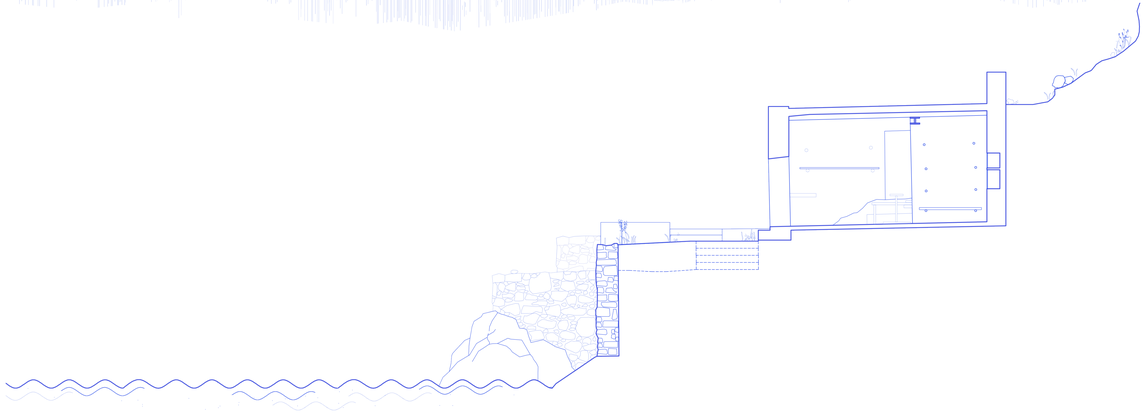
épilogue 86

θ REGARDER		Lien visuel entre habitat et eau	Statique
ι SURPLOMBER		Être au-dessus, juxtaposé superposé	Statique
κ ACCOLER		Contiguïté entre bâti et eau, les façades plongent dans l'eau	Mobile
λ PARCOURIR		Lien par le parcours	Mobile

θ Regarder		Lien visuel entre habitat et eau	Statique
ι Surplomber		Être au-dessus, juxtaposé superposé	Statique
κ Accoler		Contiguïté entre bâti et eau, les façades plongent dans l'eau	Mobile
λ Parcourir		Lien par le parcours	Mobile







programme

bains publics

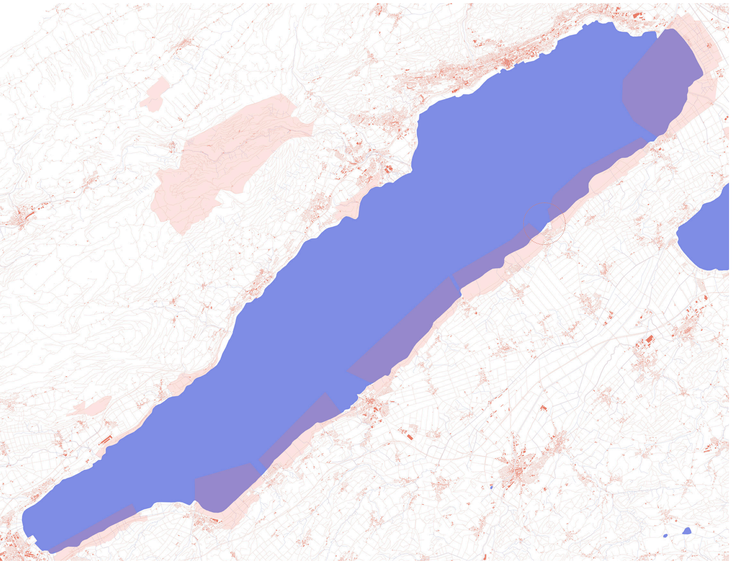
la baignade pour la collectivité

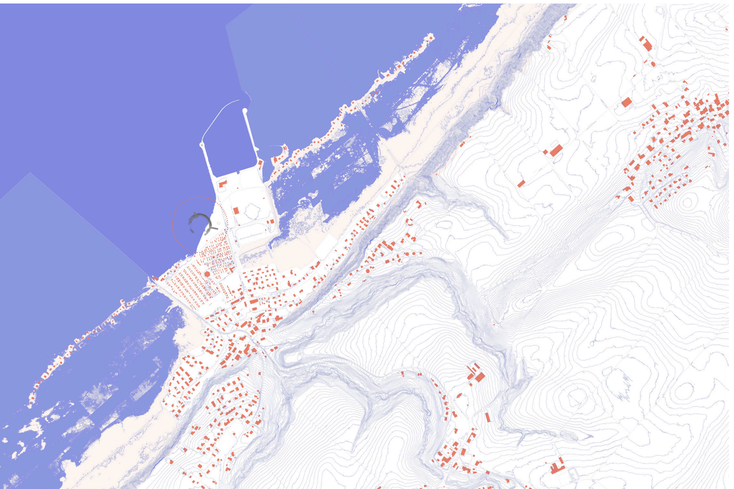
rendre accessible des étendues d’eau
pré-existantes peu ou pas exploitées
comme telles

analyse du territoire / 2 échelles

01

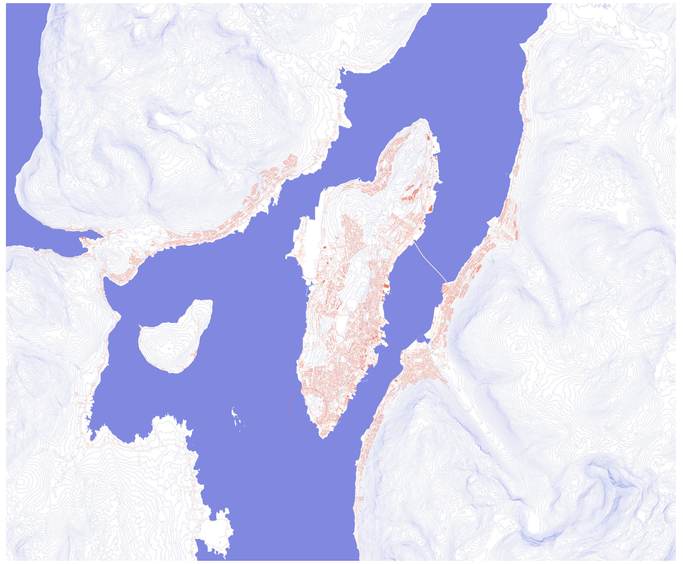
+ portalban, lac de neuchâtel, suisse

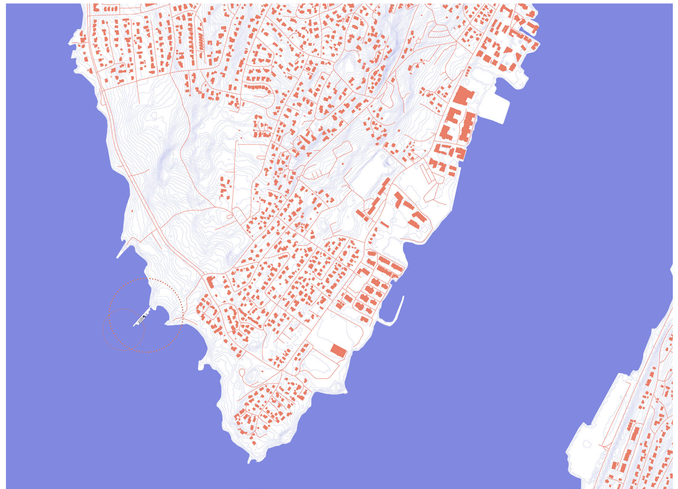




02

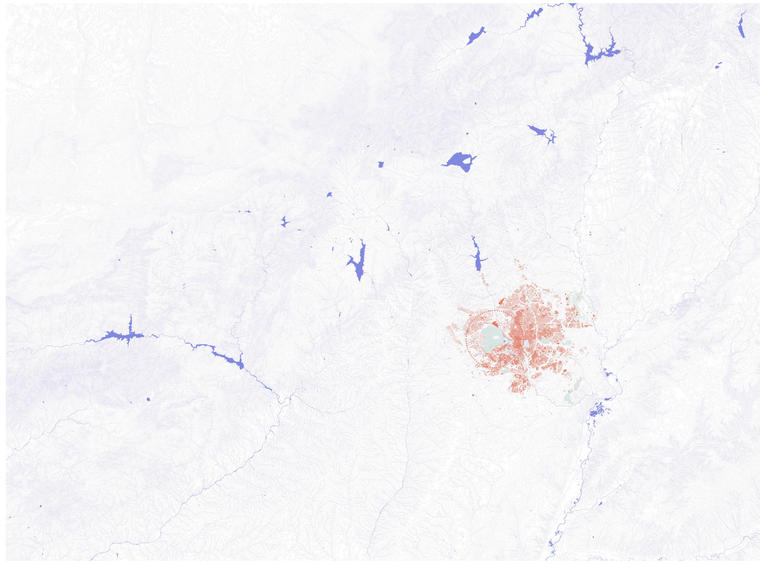
+ telegrafbukta, tromsø, norvège

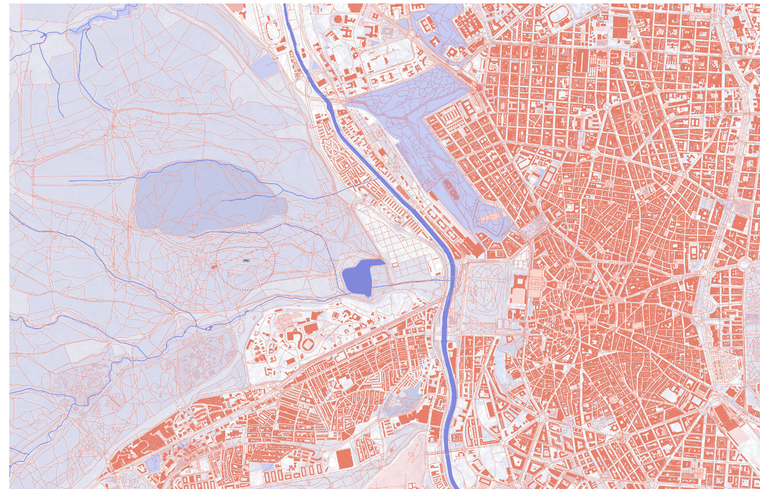




03

+ casa de campo, madrid, espagne





programme et problématique initiale

bains publics

01

+ portalban, lac de
neuchâtel, switzerland

bains de lac

passerelle

lac

utilisation manichéenne
de l'usage du territoire
entre la faune et la flore
et l'usage anthropocène

02

+ telegrafbukta,
tromsø, norway

bains froids

sauna

mer

inacessible par
le climat et la
température de l'eau

03

+ casa de campo,
madrid, spain

piscine naturelle

filtration et succesion
de bassins

rivière

insalubrité de la rivière et absence
d'accès à l'eau de manière gratuite
dans le contexte urbain

programme et propositions d'interventions

01

+ portalban, lac de neuchâtel, switzerland

02

+ telegrafbukta, tromsø, norway

03

+ casa de campo, madrid, spain

INTERVENTIONS

	bains de lac	bains froids	piscine naturelle
	passerelle	sauna	filtration et succesion de bassins
	lac	mer	rivière

FAMILY OF MATERIALIZATION — from heavy to light, from ground to sky

stone	alta quartzite	bollinger sandstone	bianco cristal granite
wood	class 5		
textile or metal			

METODOLOGY

1. biotope
2. access
3. use
4. protection

01

+ portalban, lac de
neuchâtel, switzerland

02

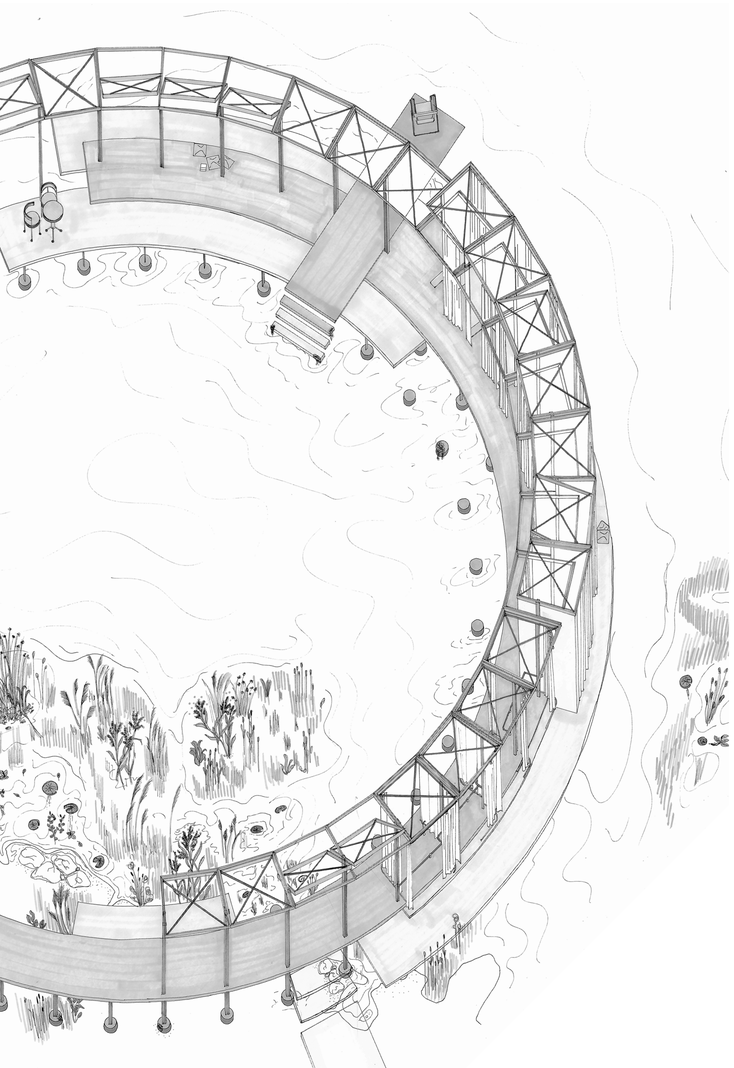
+ telegrafbukta,
tromsø, norway

03

+ casa de campo,
madrid, spain

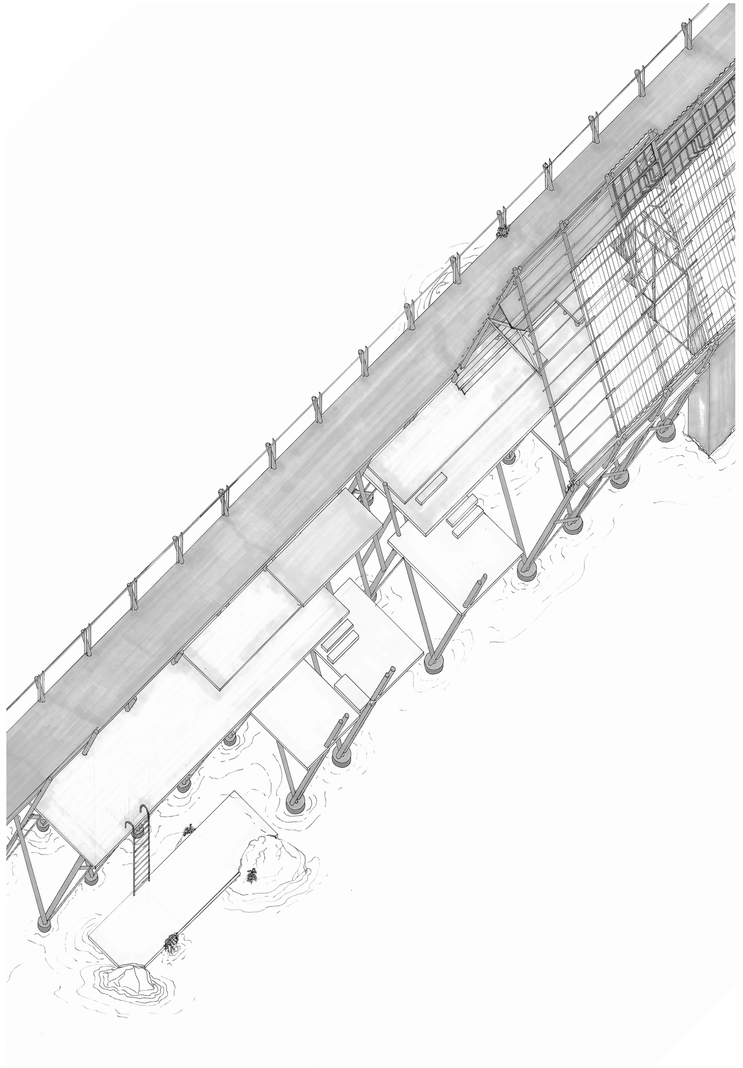
01

+ portalban, lac de
neuchâtel, switzerland



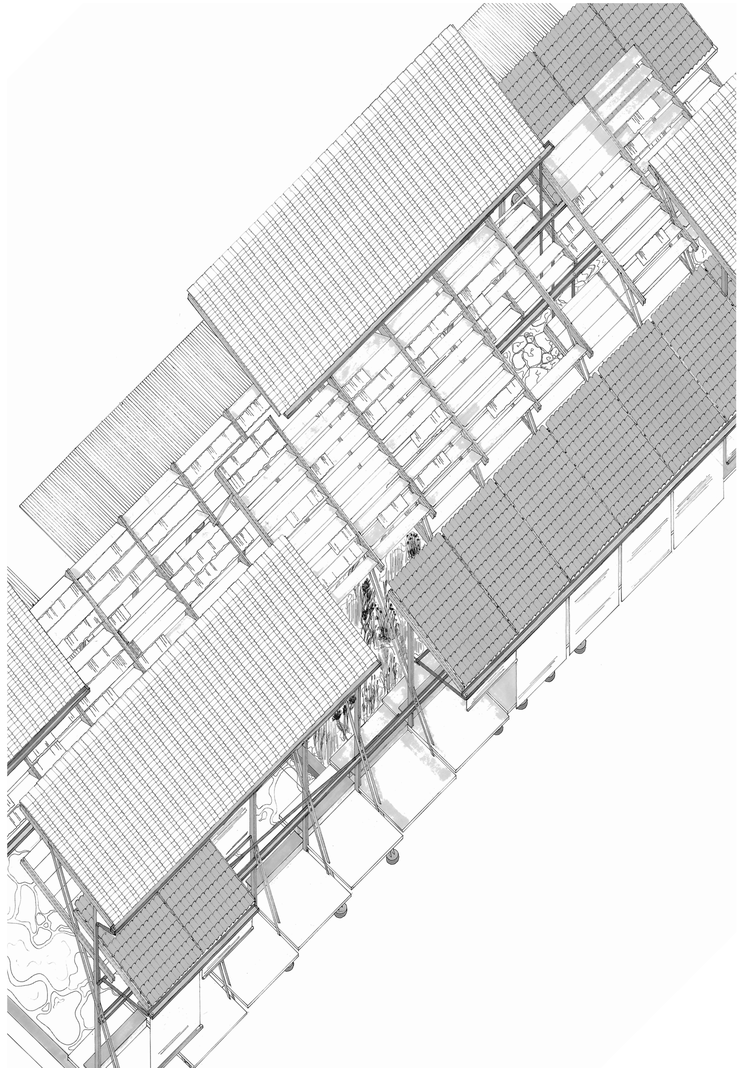
02

+ telegrafbukta,
tromsø, norway



03

+ casa de campo,
madrid, spain



01

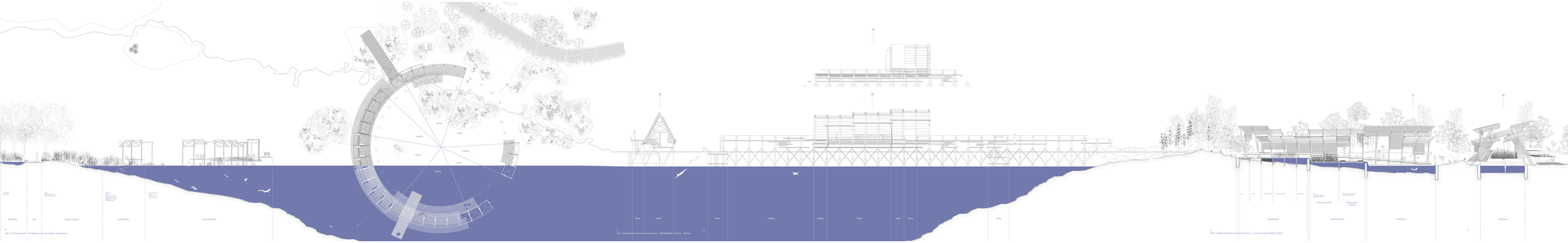
+ portalban, lac de
neuchâtel, switzerland

02

+ telegrafbukta,
tromsø, norway

03

+ casa de campo,
madrid, spain



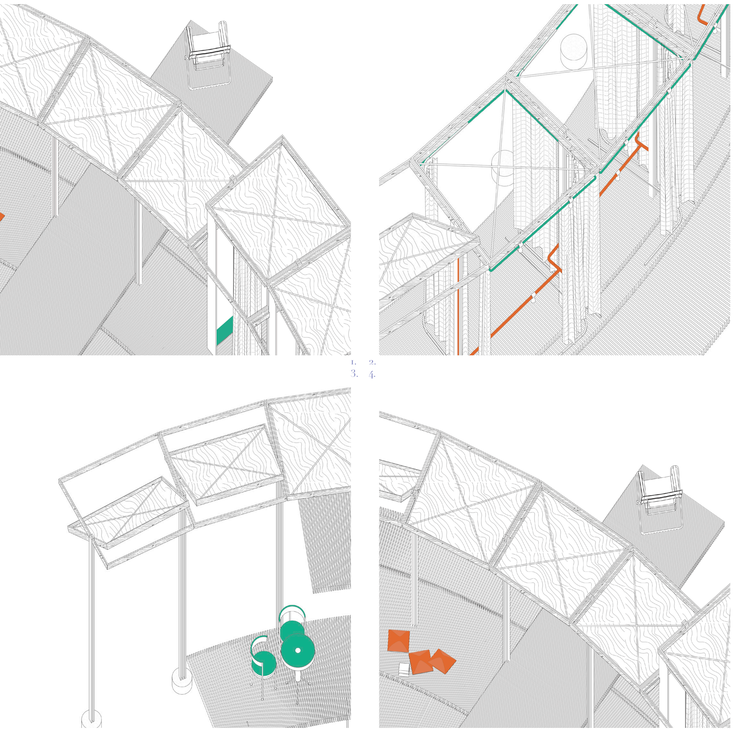
01. CERCLE 46°N - Suisse

02. LIGNE. 69°N - Norvège

03. SURFACE. 40°N - Espagne

01

+ portalban, lac de
neuchâtel, switzerland

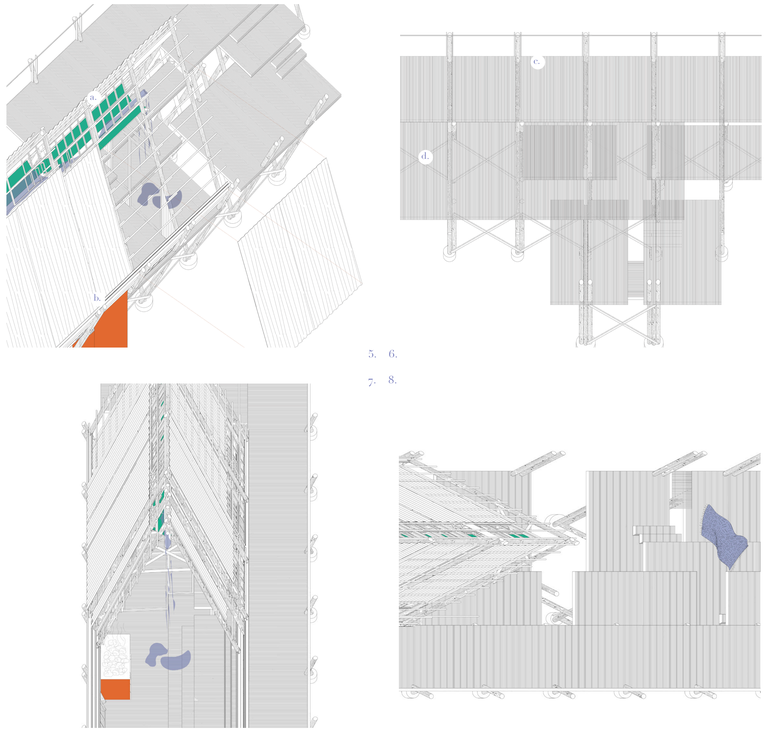


1. 2.
3. 4.

USES DIFFERENTIATED ROOF SYSTEM

02

+ telegrafbukta,
tromsø, norway

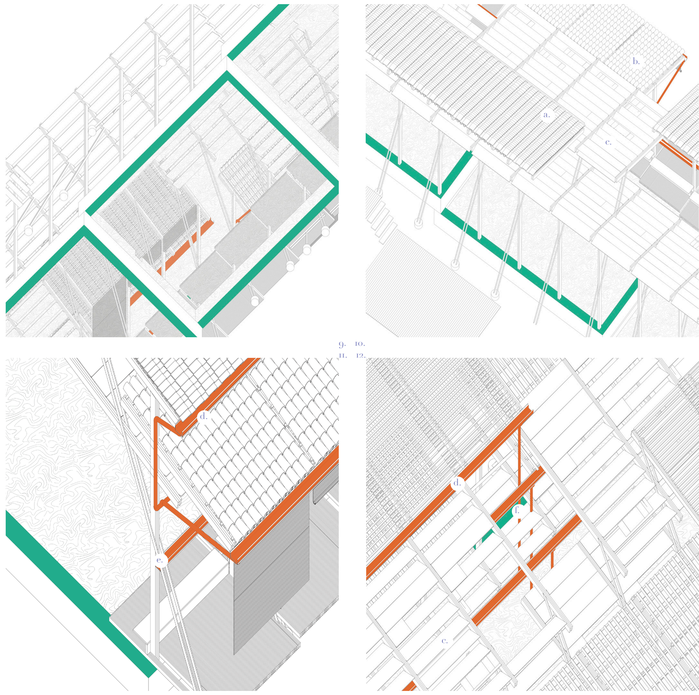


5. 6.
7. 8.

SEASONAL FOLDABLE ROOF SYSTEM

03

+ casa de campo,
madrid, spain

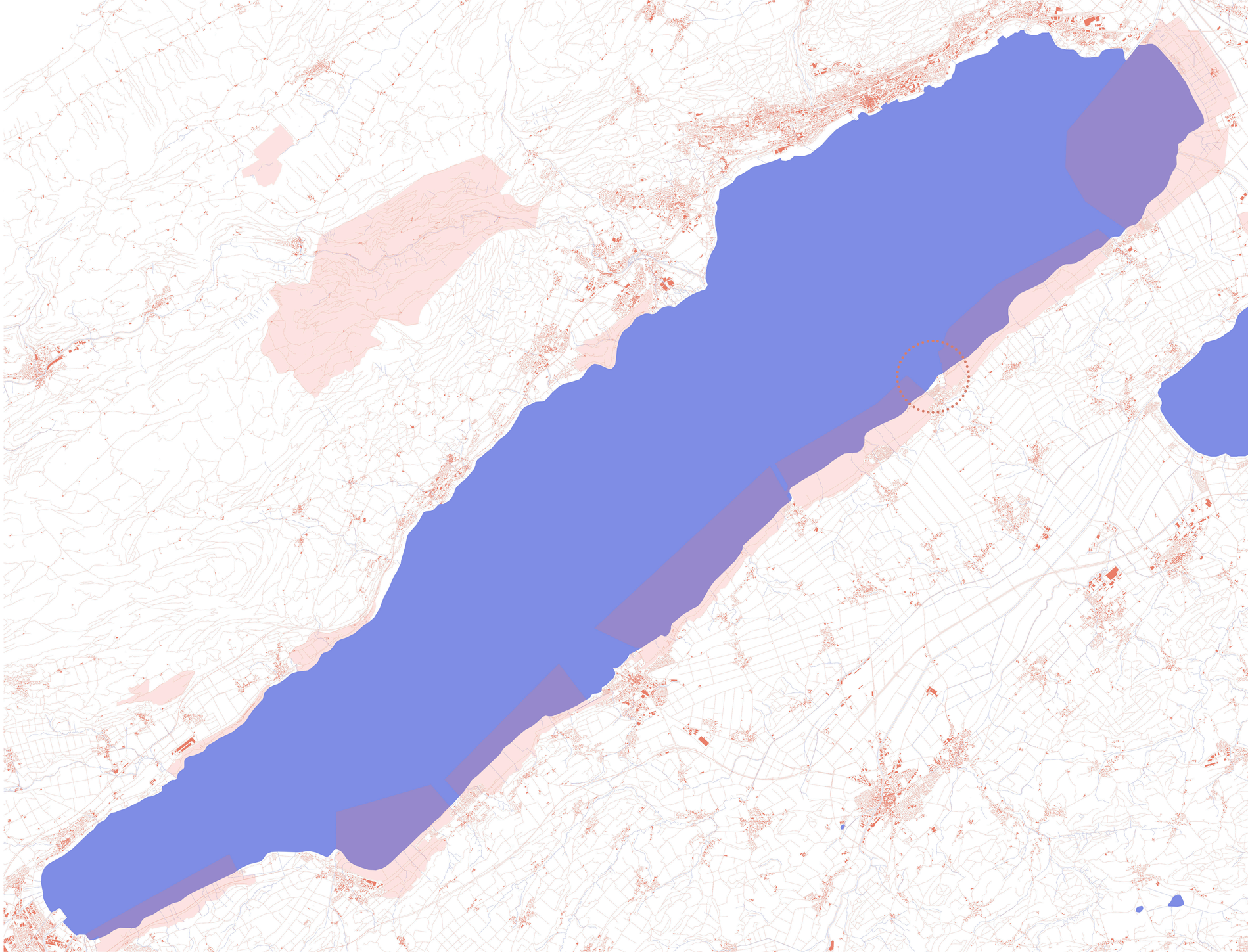


9. 10.
11. 12.

HEAT EXCHANGE ROOF SYSTEM
WATER SYSTEM

01

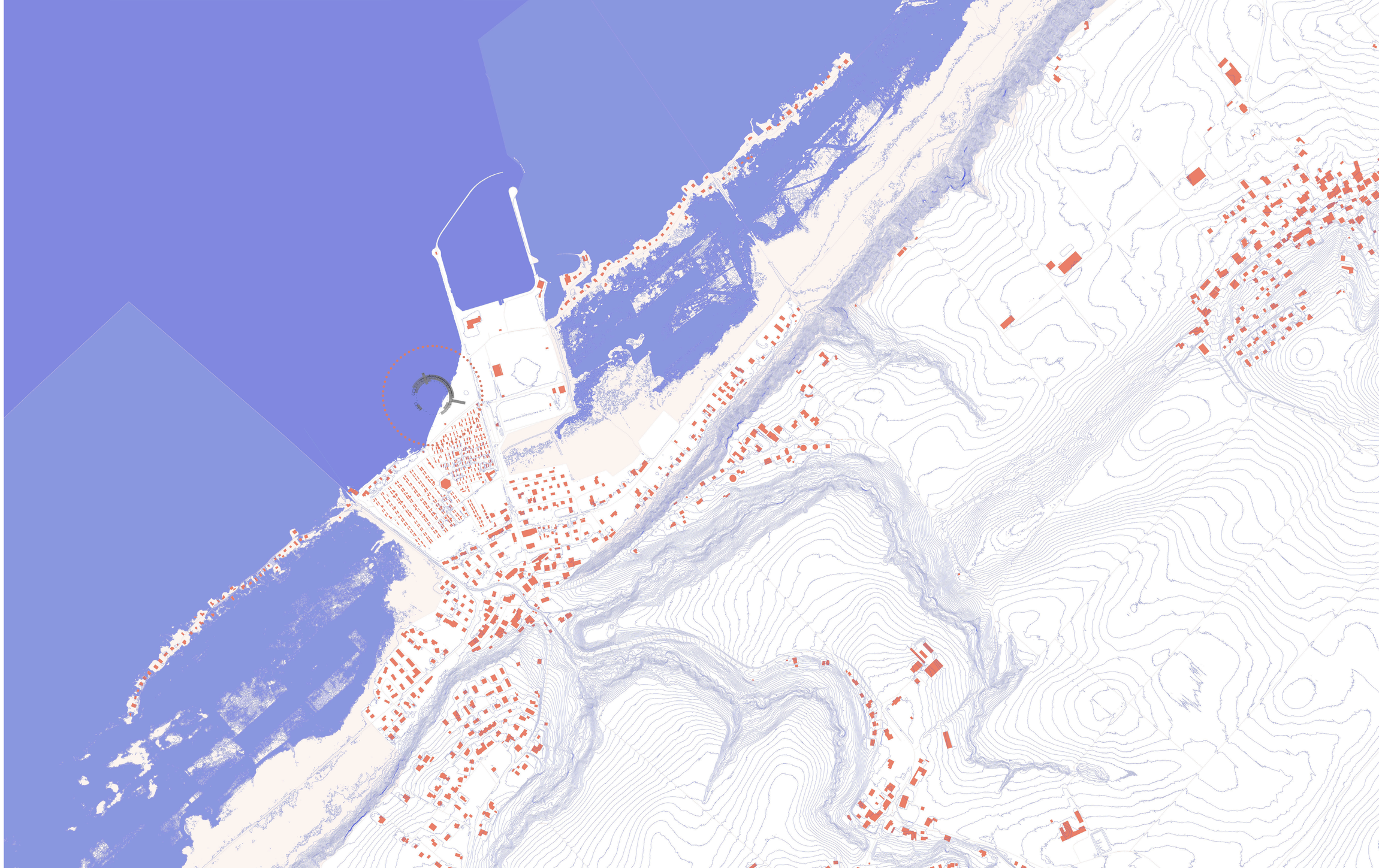
+ portalban, lac de
neuchâtel, switzerland



1.45'000 / Grande Cariçaie reserve and interstices - Lake Neuchâtel ; NE/VD/FR - Switzerland

01

+ portalban, lac de neuchâtel, switzerland

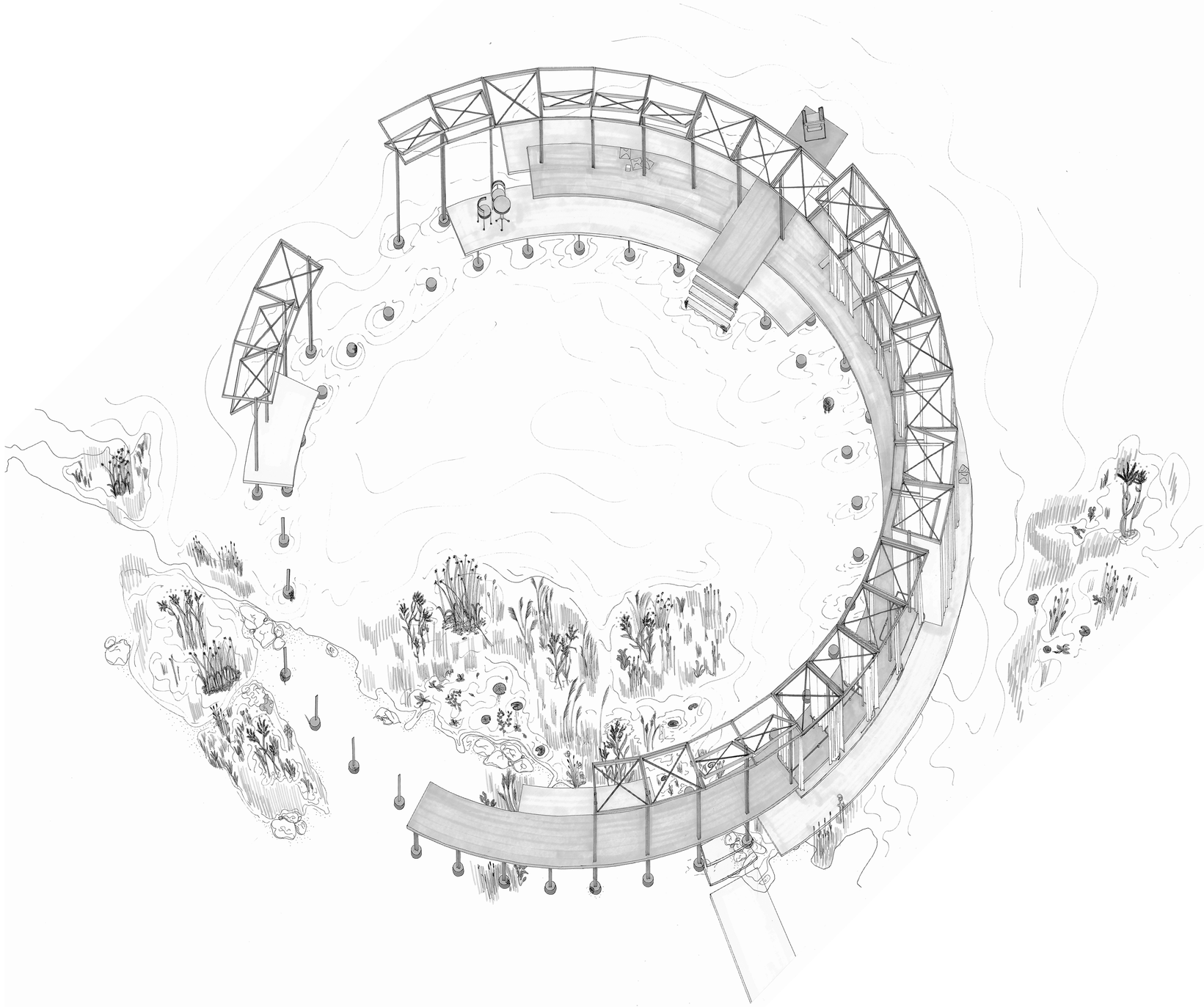


1.2'500 / Portalban- Lake Neuchâtel ; NE/VD/FR - Switzerland

01

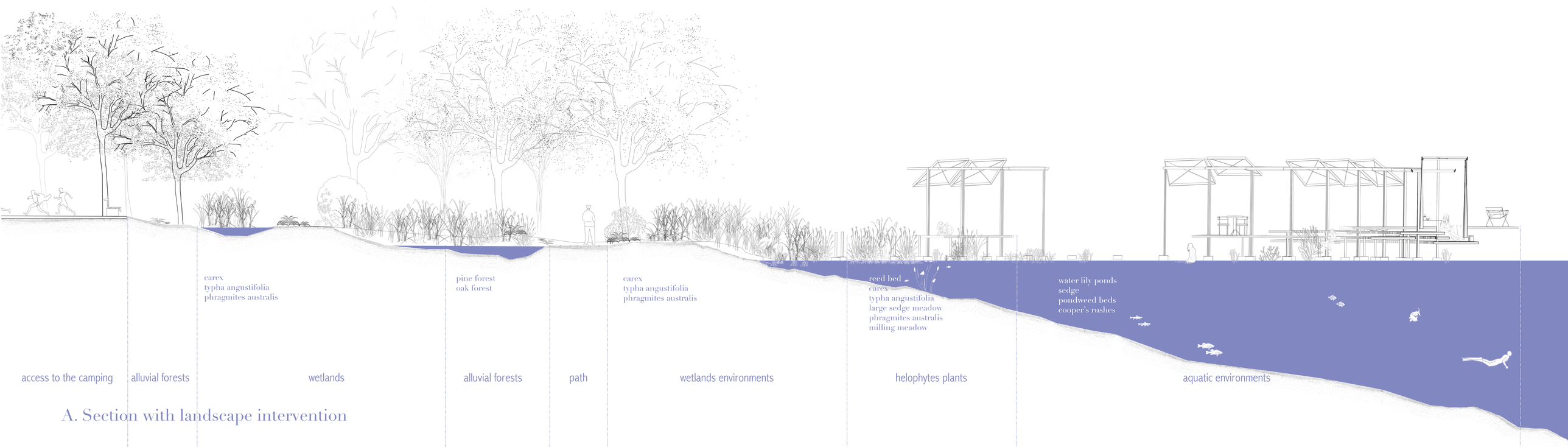
+ portalban, lac de
neuchâtel, switzerland

CERCLE 46°N



01

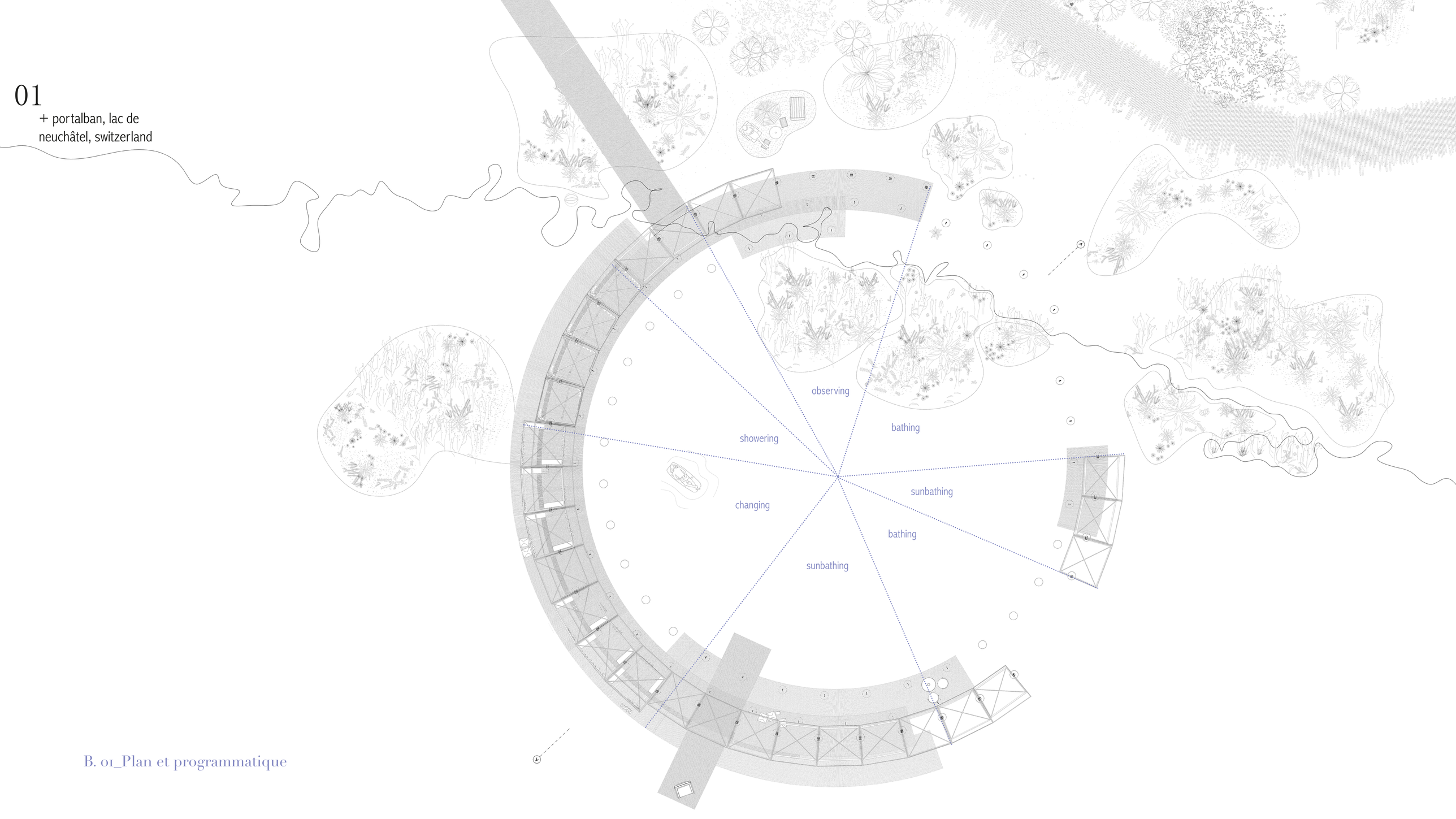
+ portalban, lac de
neuchâtel, switzerland



A. Section with landscape intervention

01

+ portalban, lac de
neuchâtel, switzerland

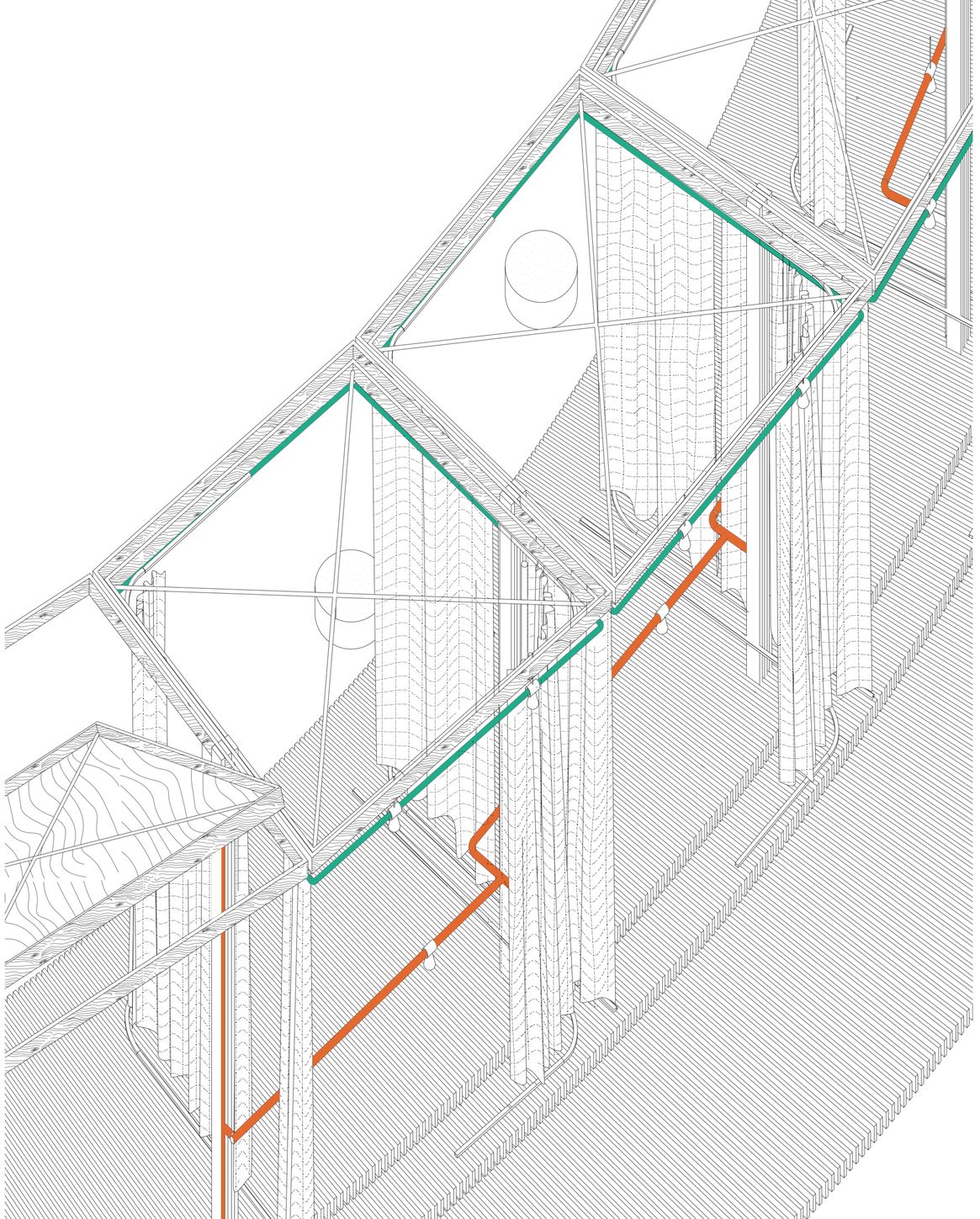


01

+ portalban, lac de
neuchâtel, switzerland

USES DIFFERENTIATED ROOF SYSTEM

roofs as showers

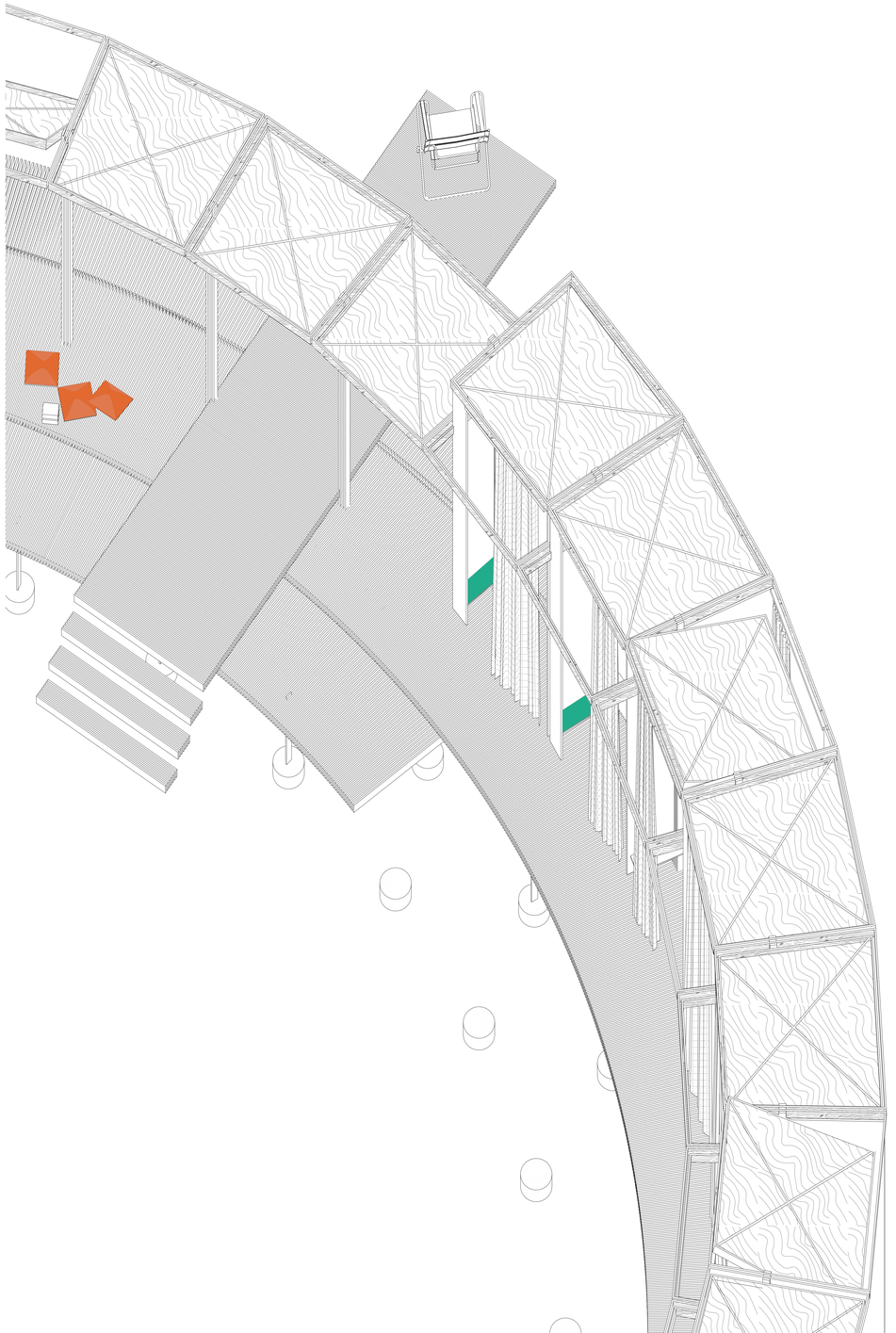


01

+ portalban, lac de
neuchâtel, switzerland

USES DIFFERENTIATED ROOF SYSTEM

roofs as changing rooms

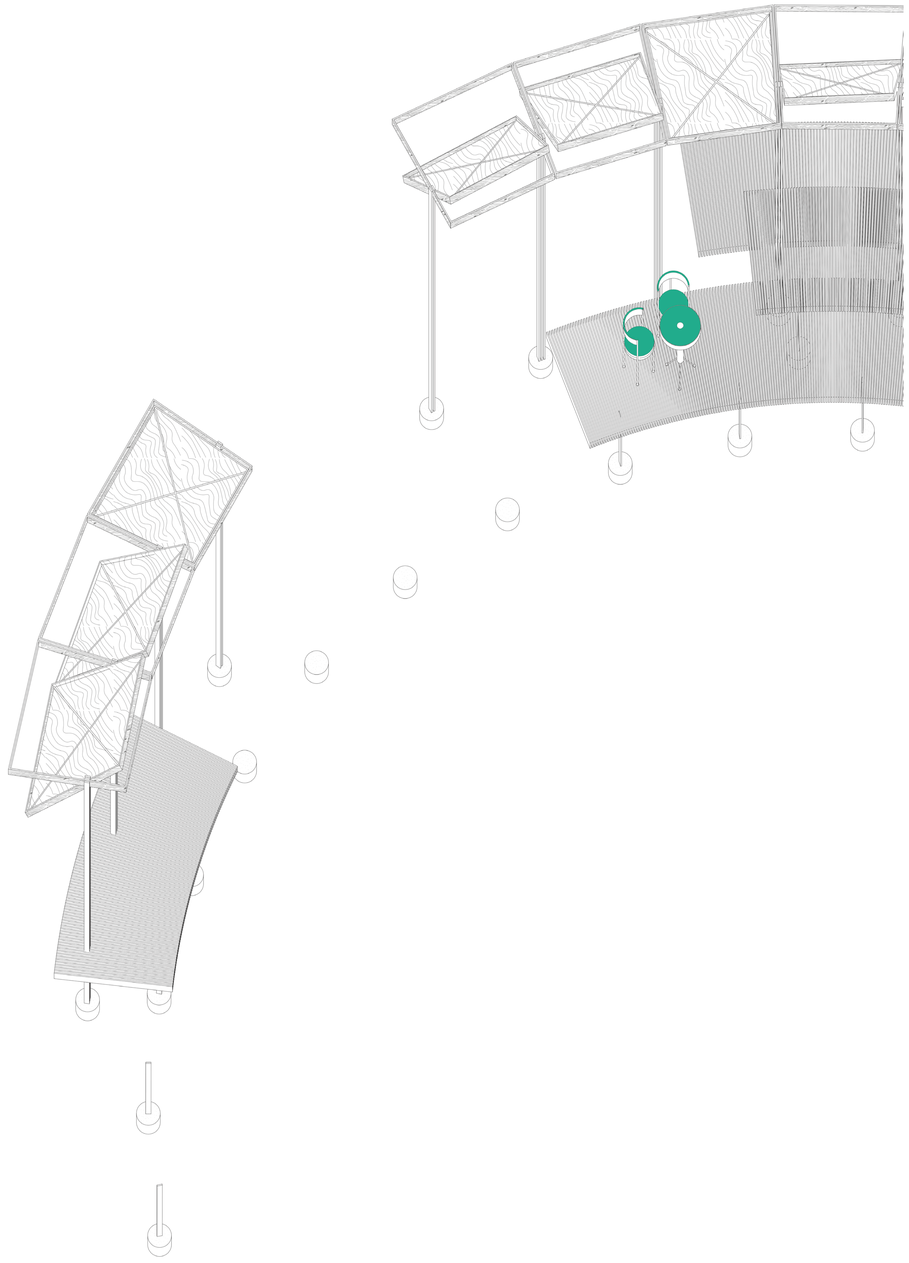


01

+ portalban, lac de
neuchâtel, switzerland

USES DIFFERENTIATED ROOF SYSTEM

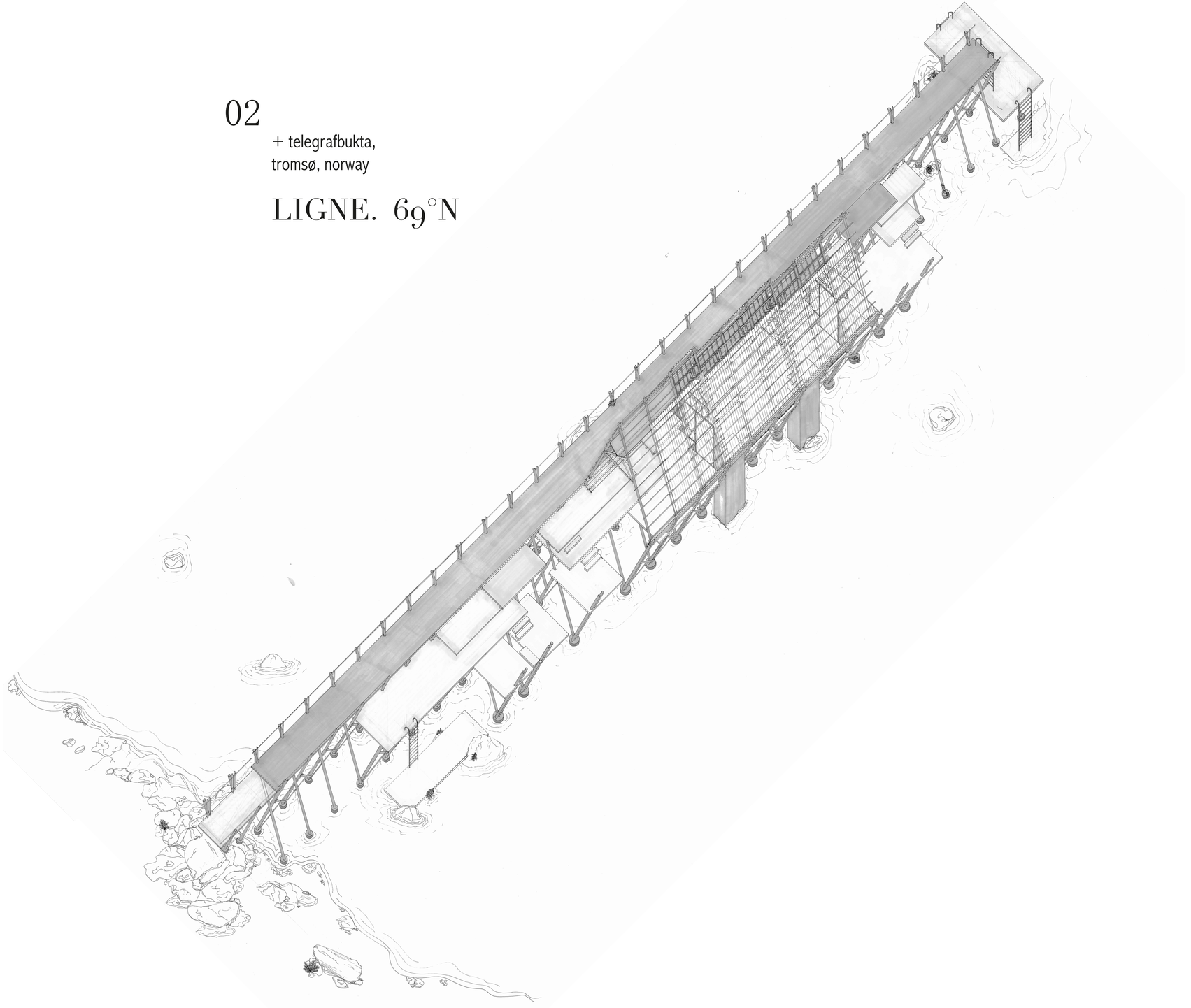
roofs as sunshading devices



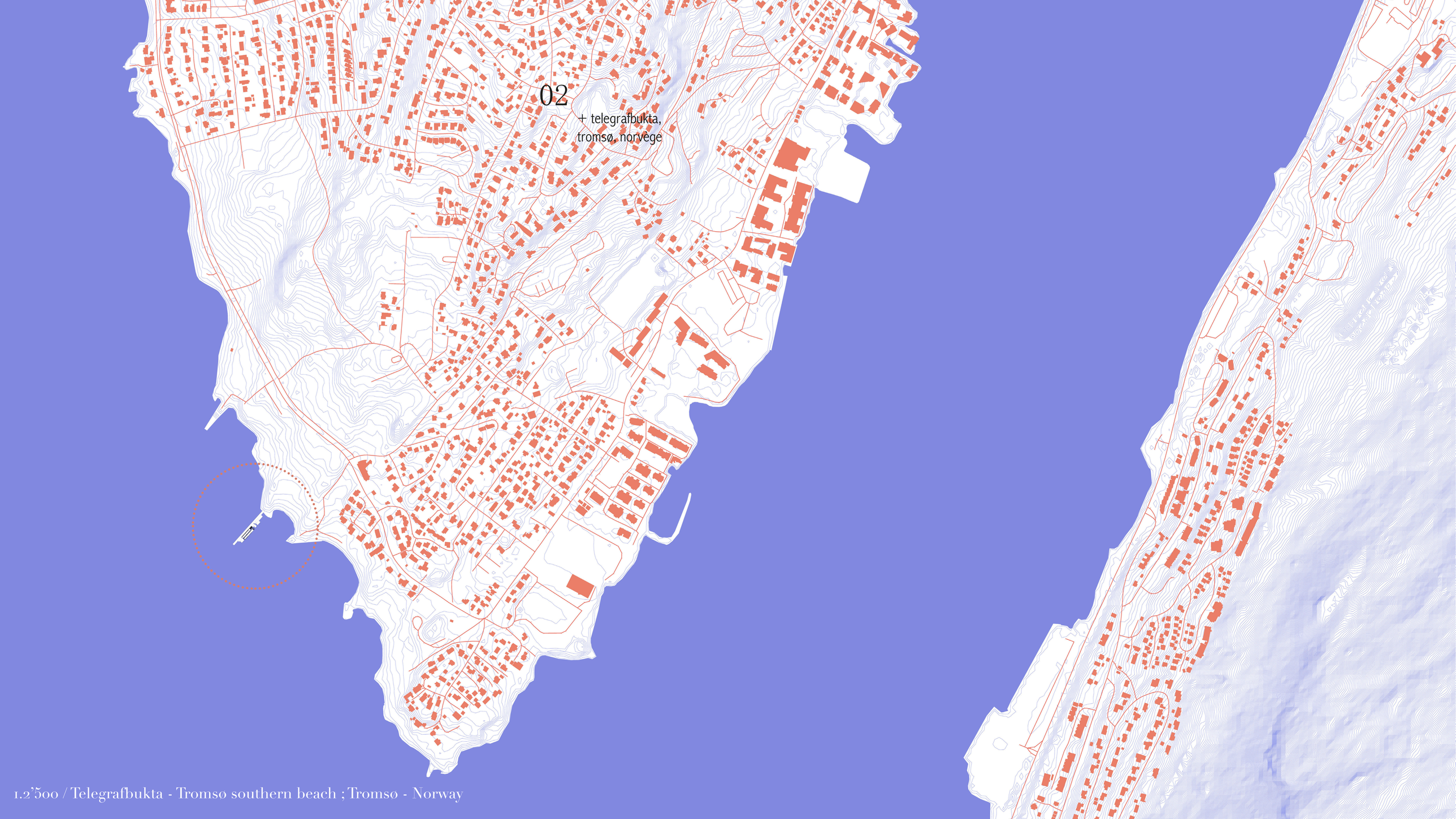
02

+ telegrafbukta,
tromsø, norway

LIGNE. 69°N



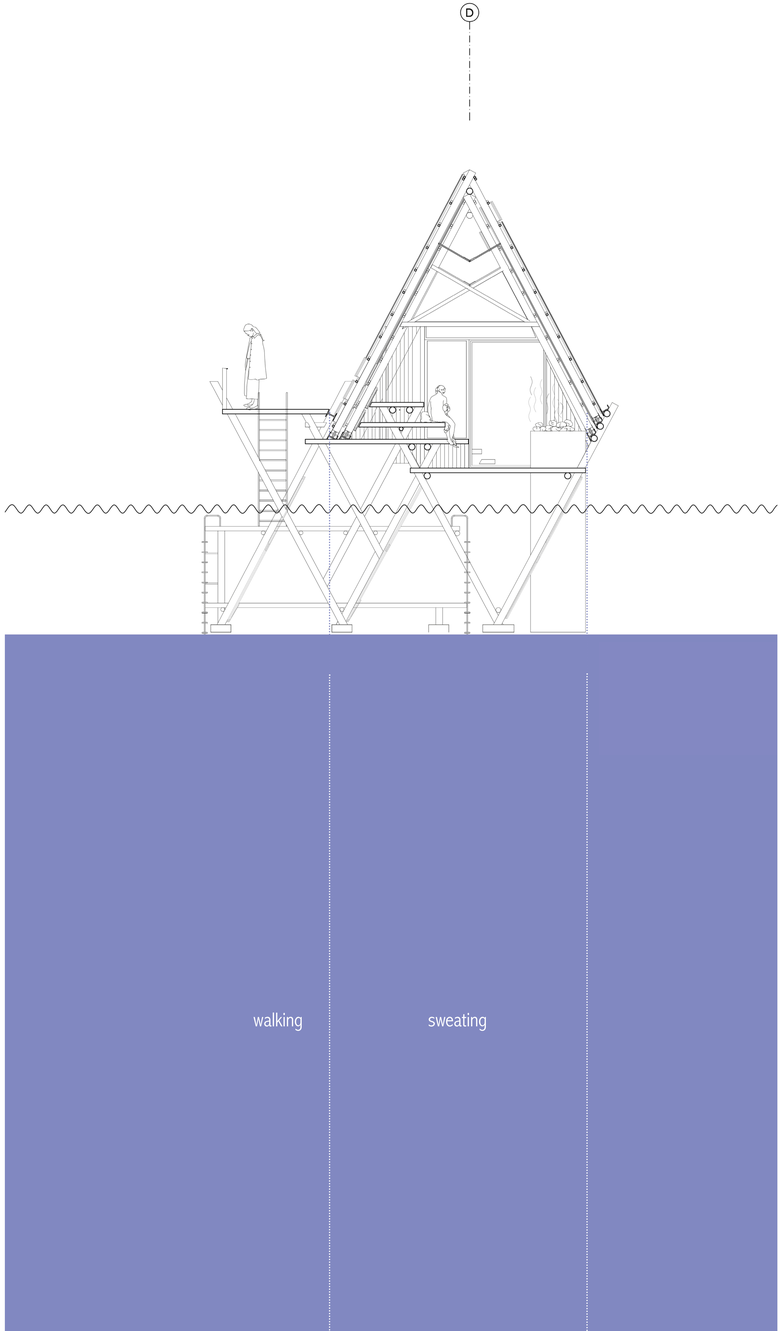
02
+ telegrafbukta,
tromsø, norvège
1.25’000 / Tromso fjord - Norway



1.2’500 / Telegrafbukta - Tromsø southern beach ; Tromsø - Norway

02

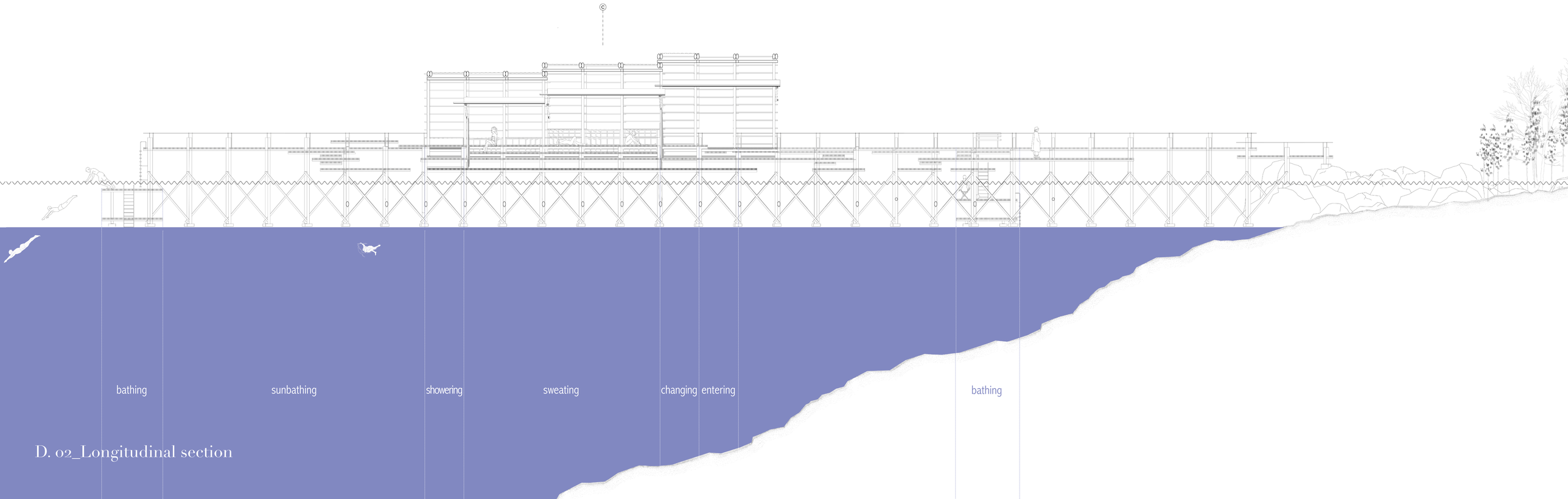
+ telegrafbukta,
tromsø, norway



C. 02_Transversal section

02

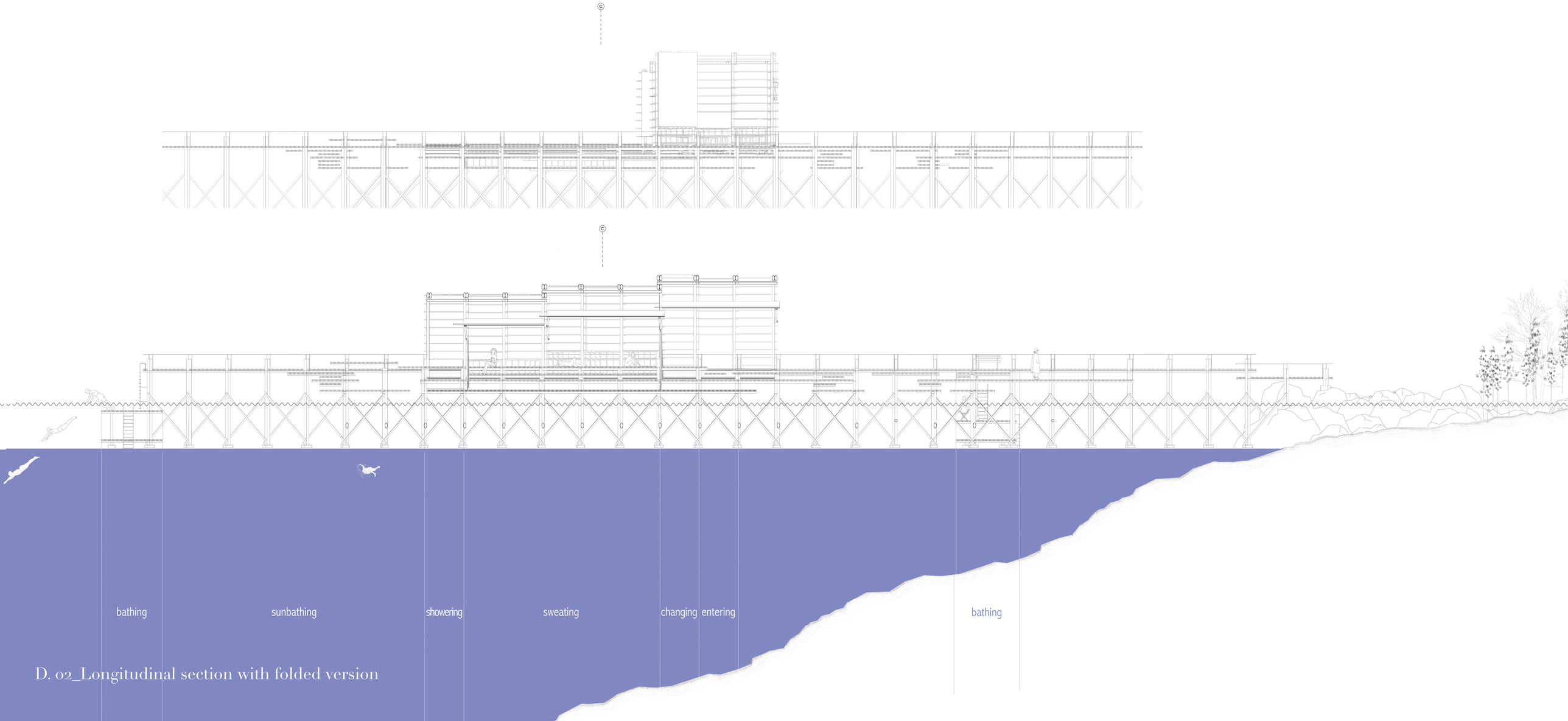
+ telegrafbukta,
tromsø, norway



D. 02_Longitudinal section

02

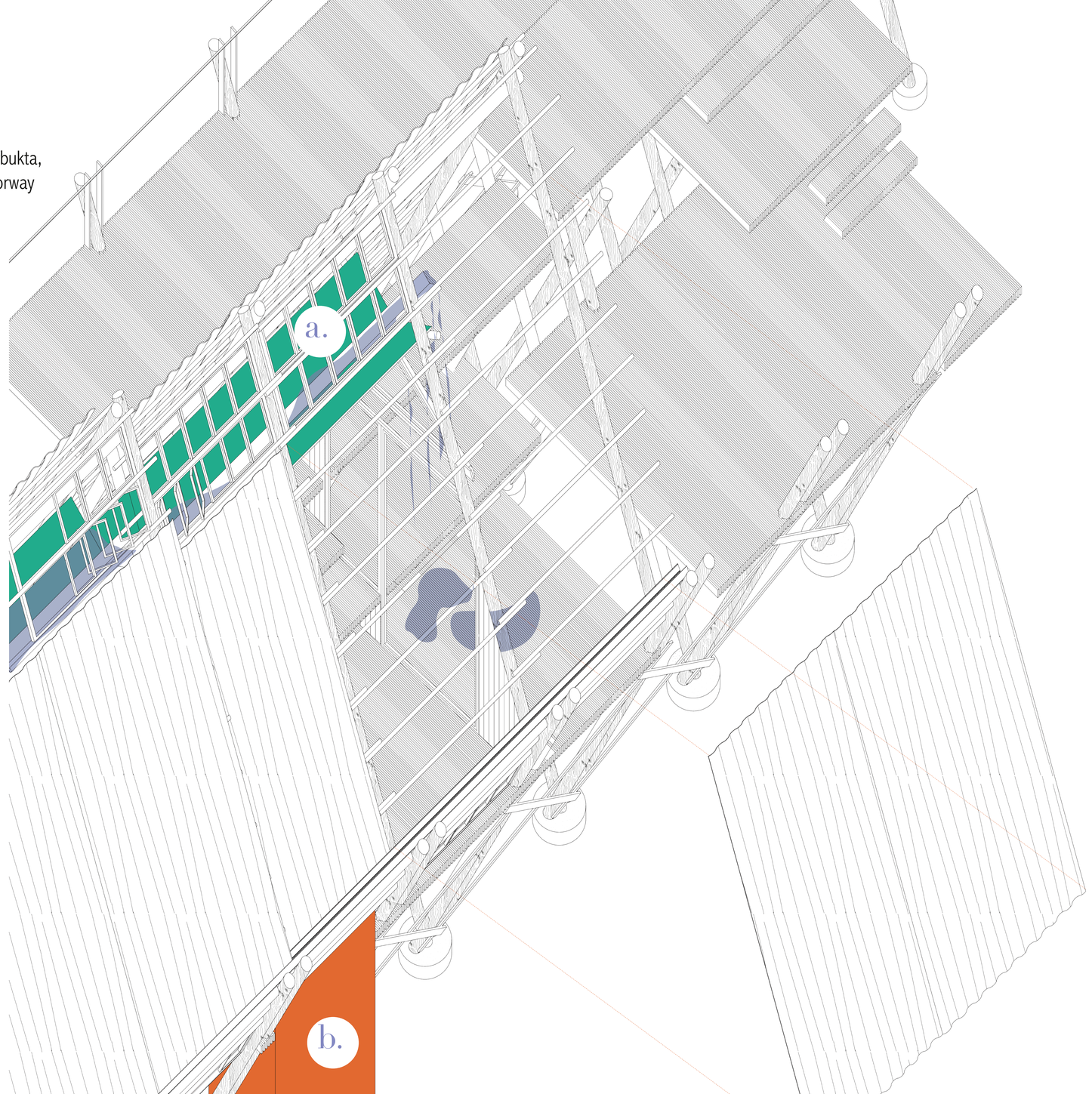
+ telegrafbukta,
tromsø, norway



D. 02_Longitudinal section with folded version

02

+ telegrafbukta,
tromsø, norway



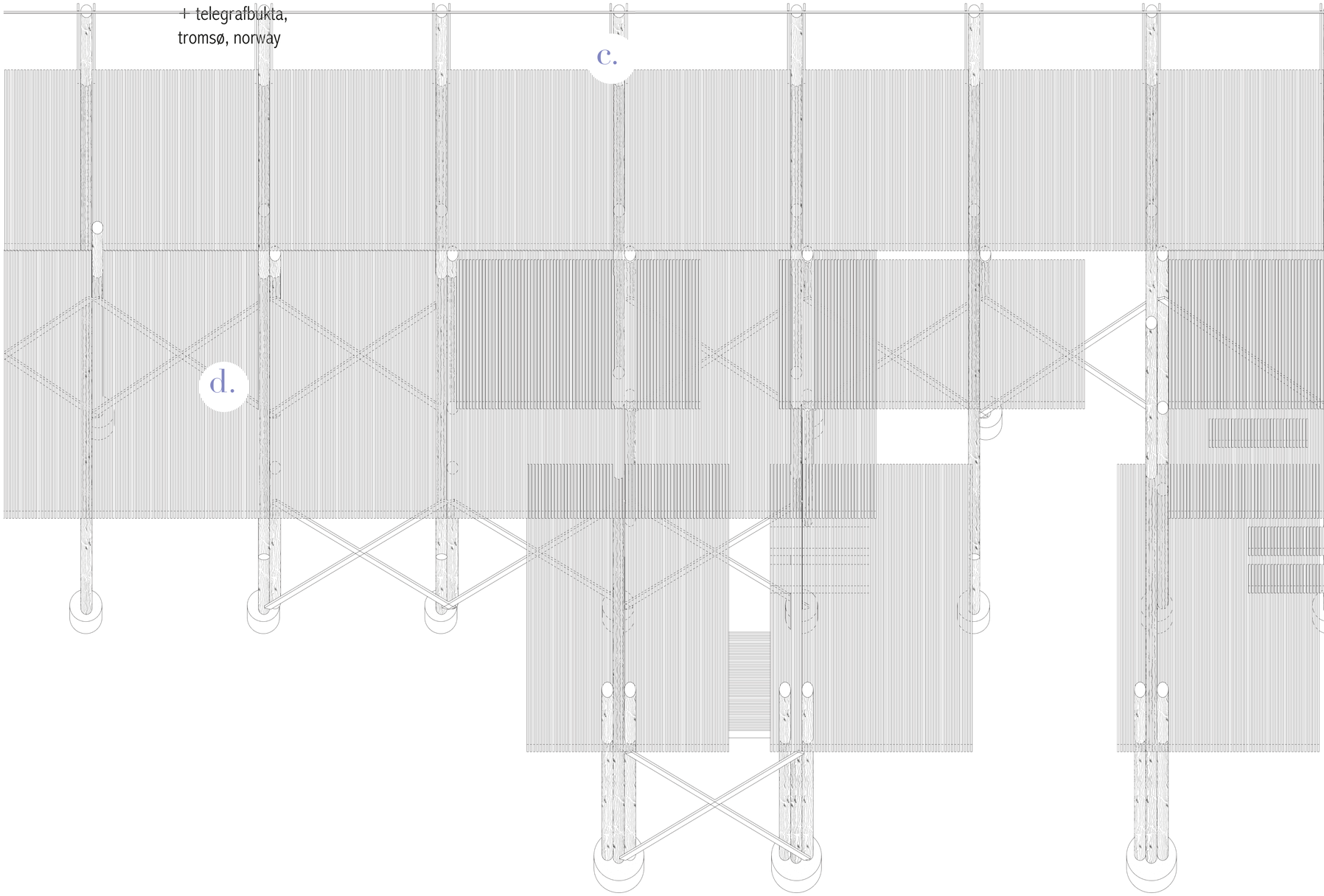
SEASONAL FOLDABLE ROOF SYSTEM

winter

5. rainwater canal (a.) on the exit of the sauna in winter usable as a showering water (unfolded version) with the sauna wood stove (b.).

02

+ telegrafbukta,
tromsø, norway



SEASONAL FOLDABLE ROOF SYSTEM

all seasons

6. walking (c.) and sunbathing platforms (d.) in summer (folded version).

02

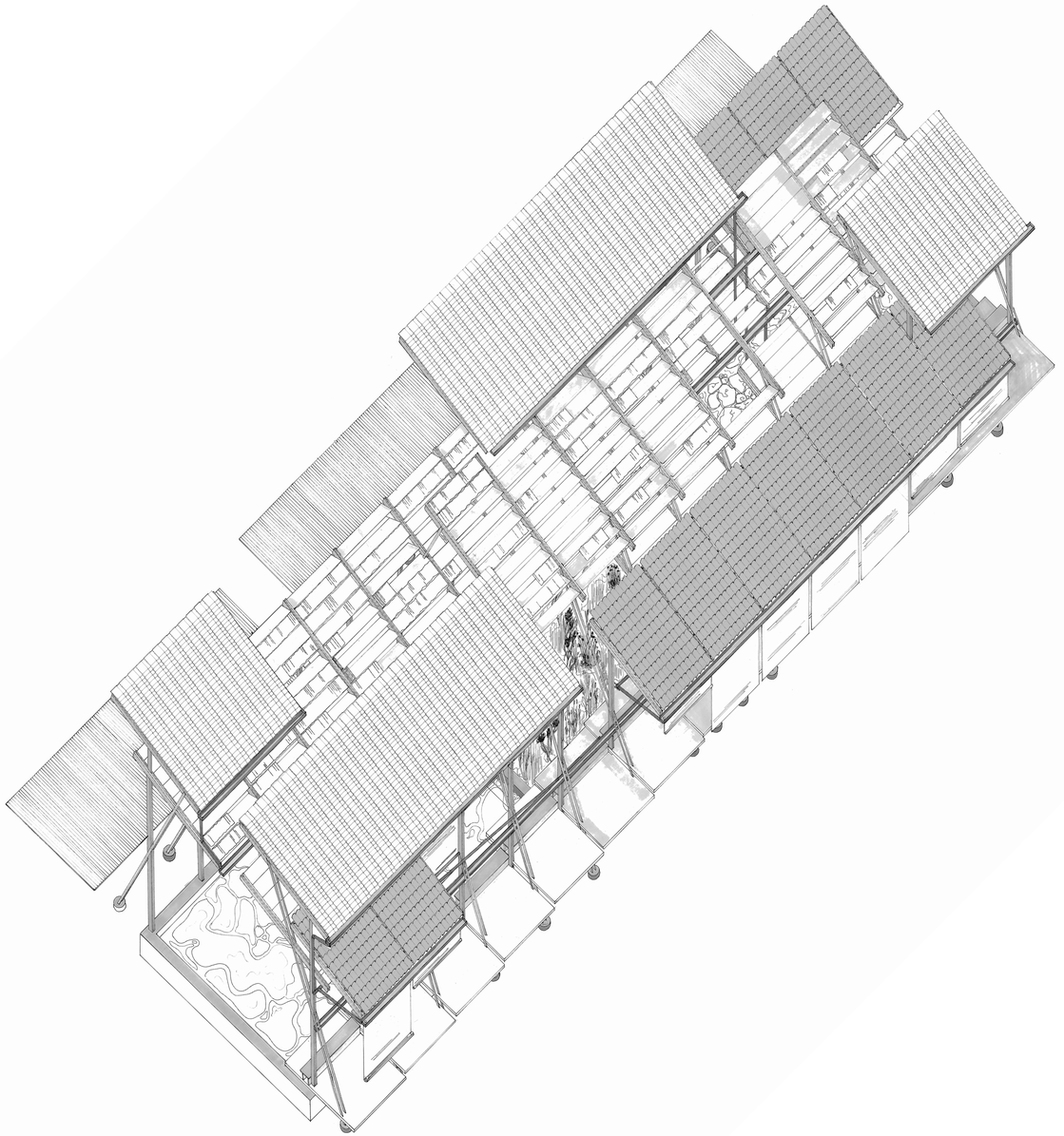
+ telegrafbukta,
tromsø, norway

SEASONAL FOLDABLE ROOF SYSTEM

summer

7. folded version of the sauna during summer with still usable rainwater canal

8. platforms in winter with the folded sauna



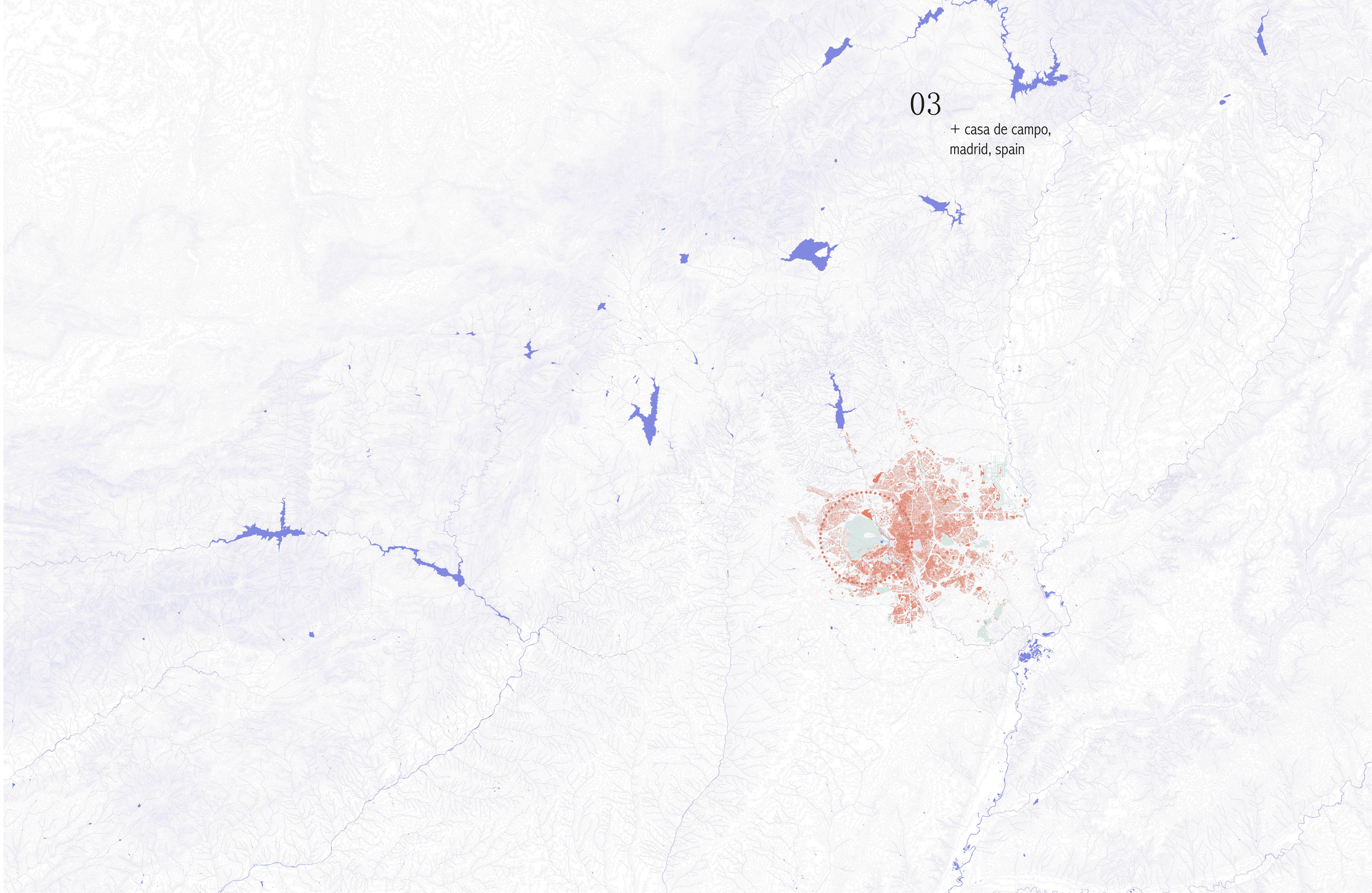
03

+ casa de campo,
madrid, spain

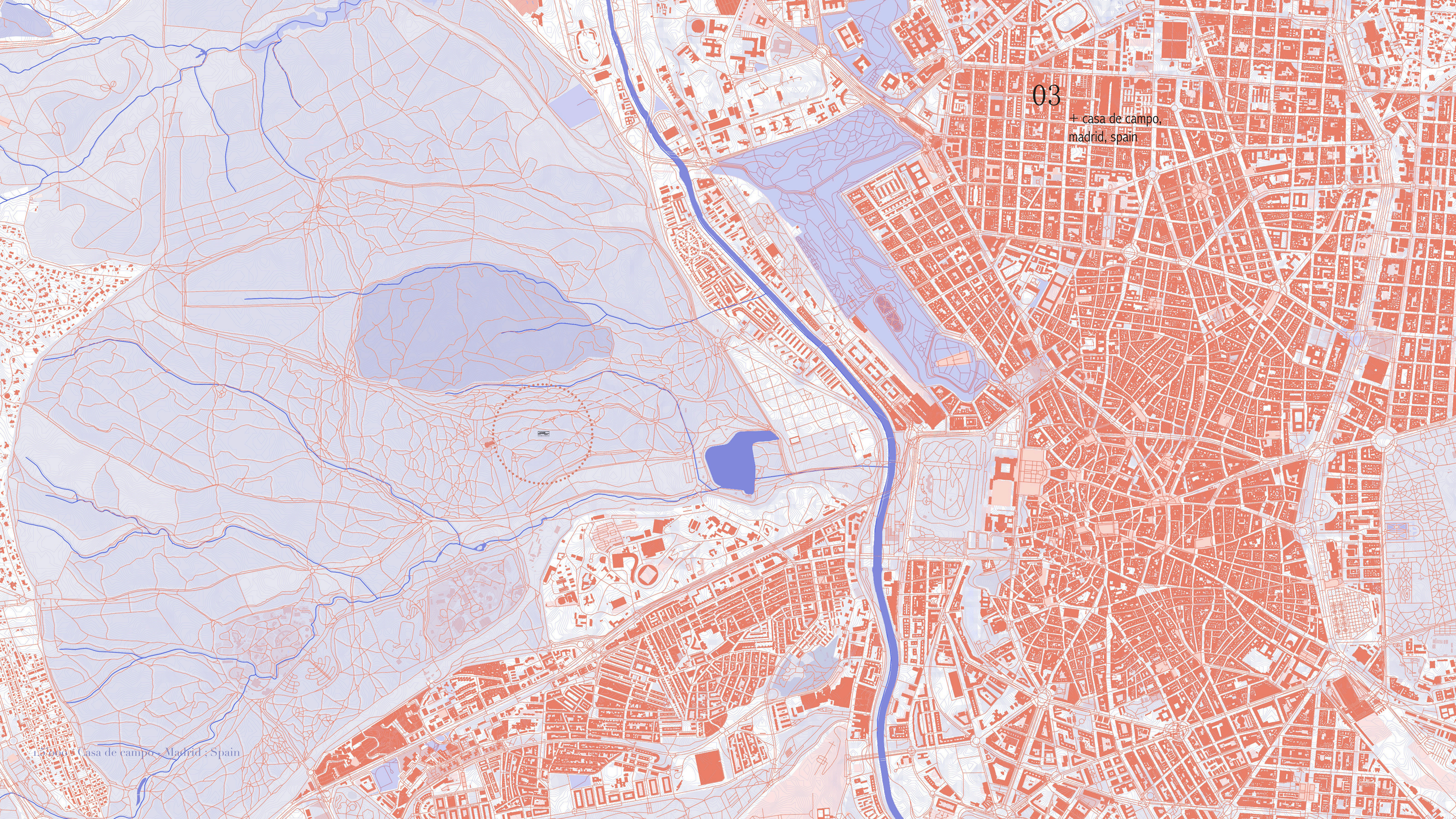
SURFACE. 40°N

03

+ casa de campo,
madrid, spain



1.100'000 / Surrounding bathing areas in the Sierra de Guadarrama - Madrid ; Spain



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Latitude Casa de campo - Madrid ; Spain

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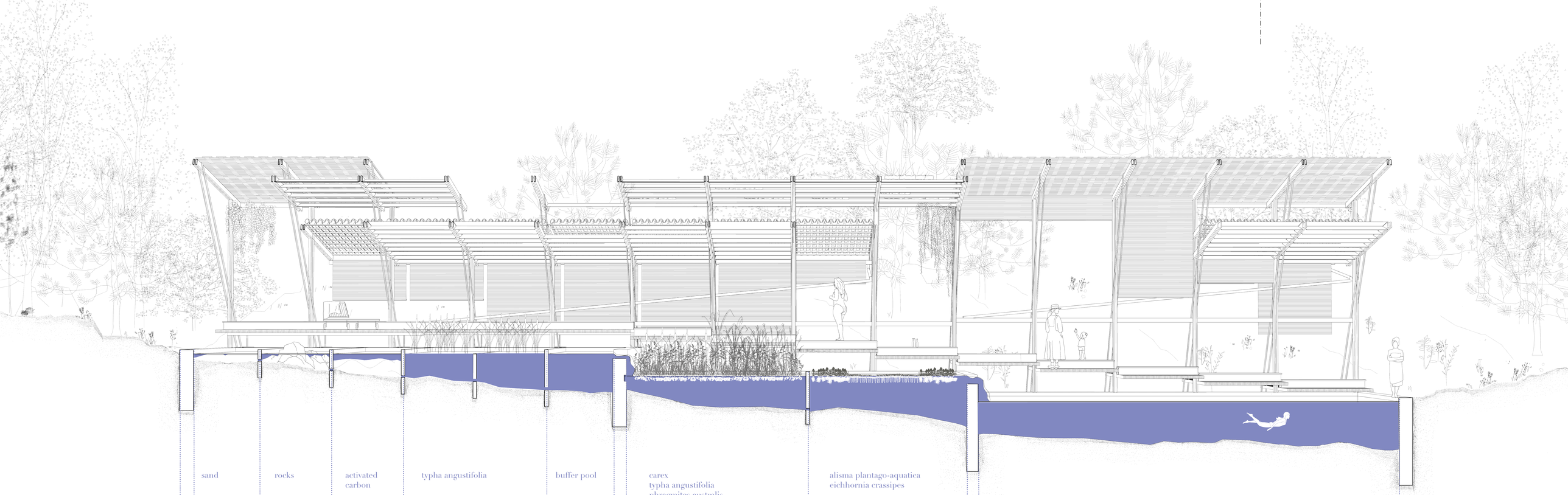

E. 03_Longitudinal section with natural pool system

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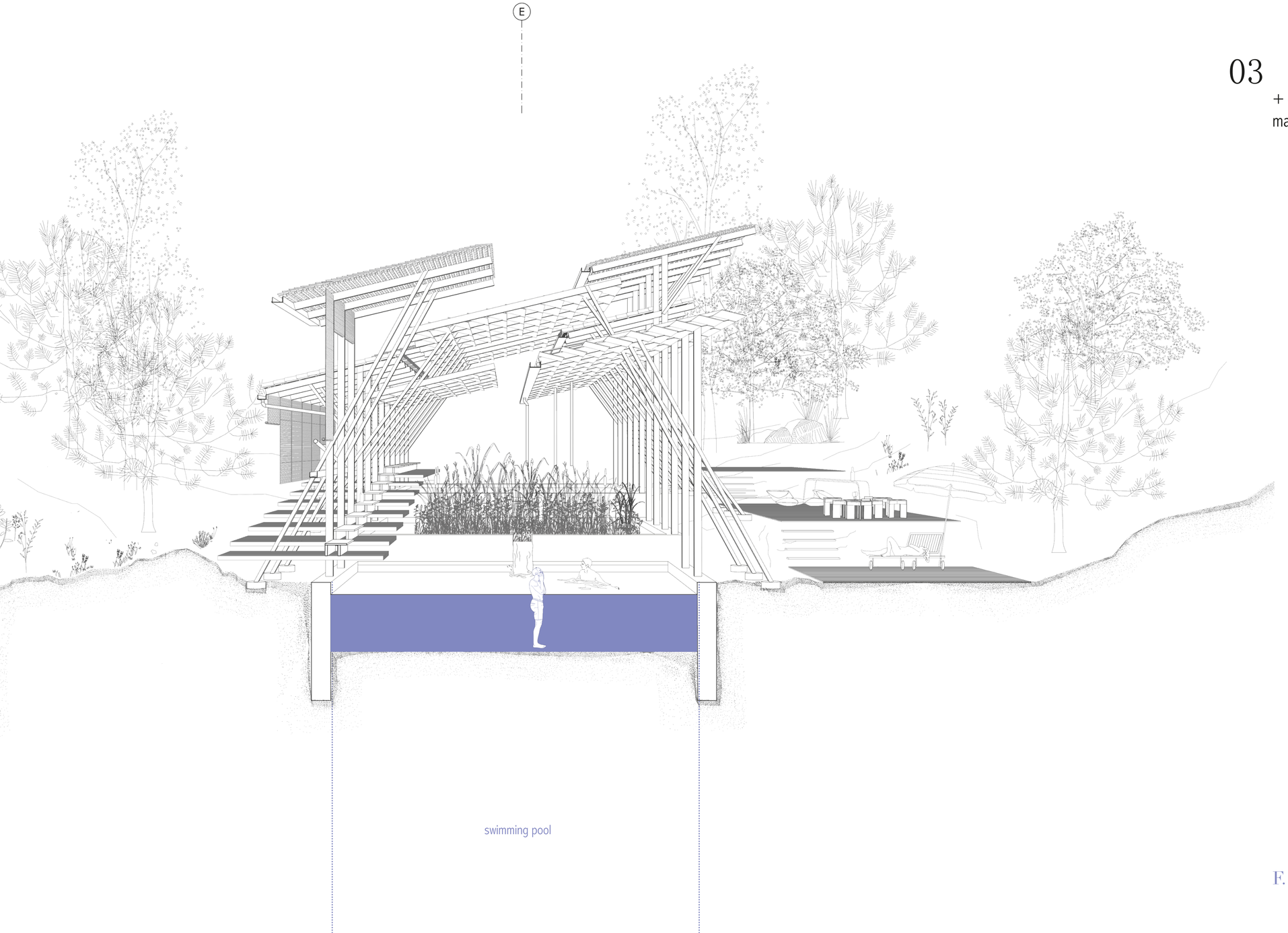
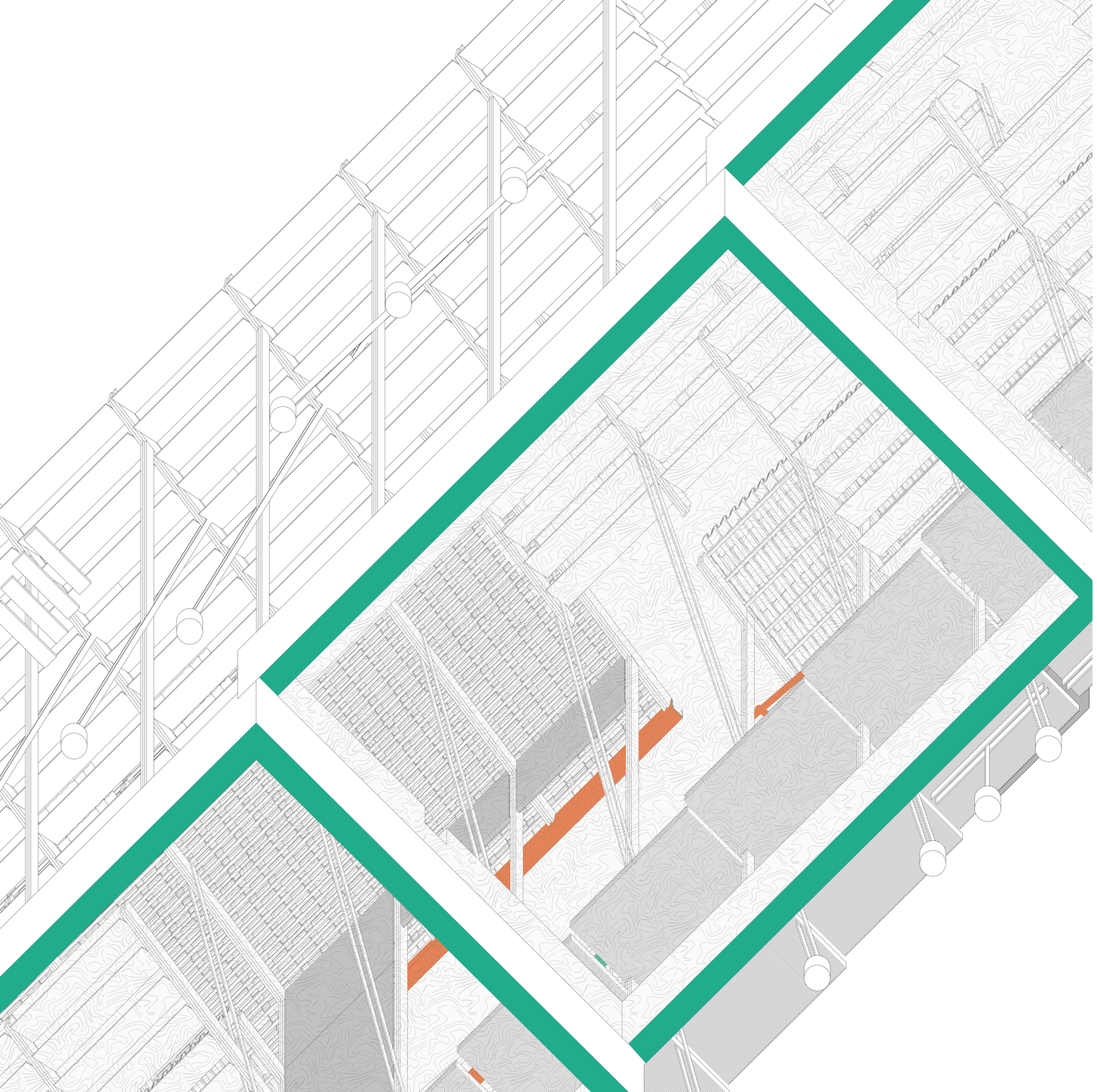


F. 03_Transversal section



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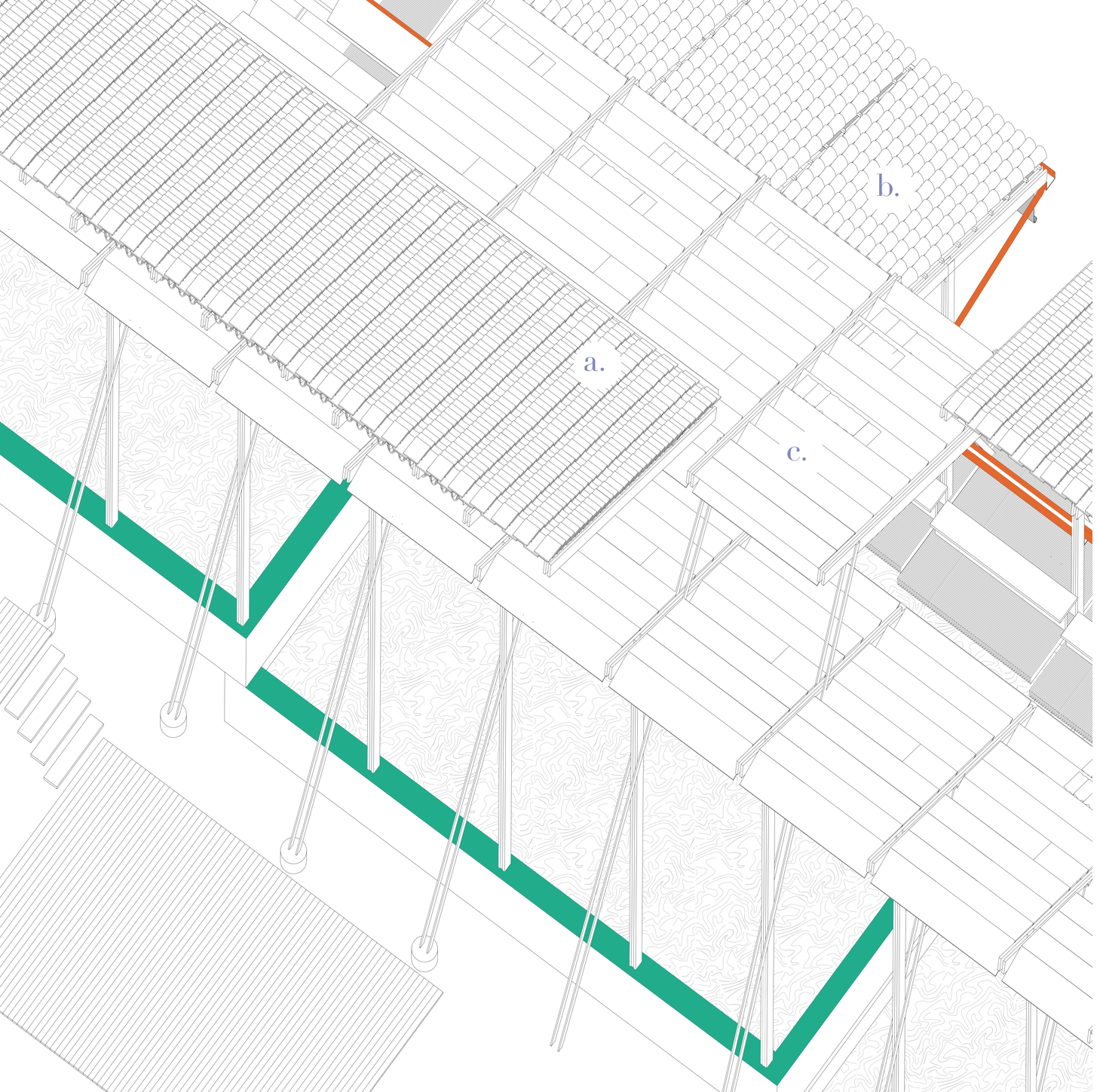
HEAT EXCHANGE ROOF SYSTEM

pools and the 3 roofs types viewed from under



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HEAT EXCHANGE ROOF SYSTEM

(a.) albedo white tiles roof for reflection of sunlight (rayonnement)
(b.) inertia canal tiles to delay in retransmission of heat (conduction)
(c.)diffuse lightning roof with panels and movable curtains (convection)

WATER SYSTEM

RAINWATER

rainwater harvesting gutter

bracing system gutter

ornemental gutter

re-ingestion in water purification system

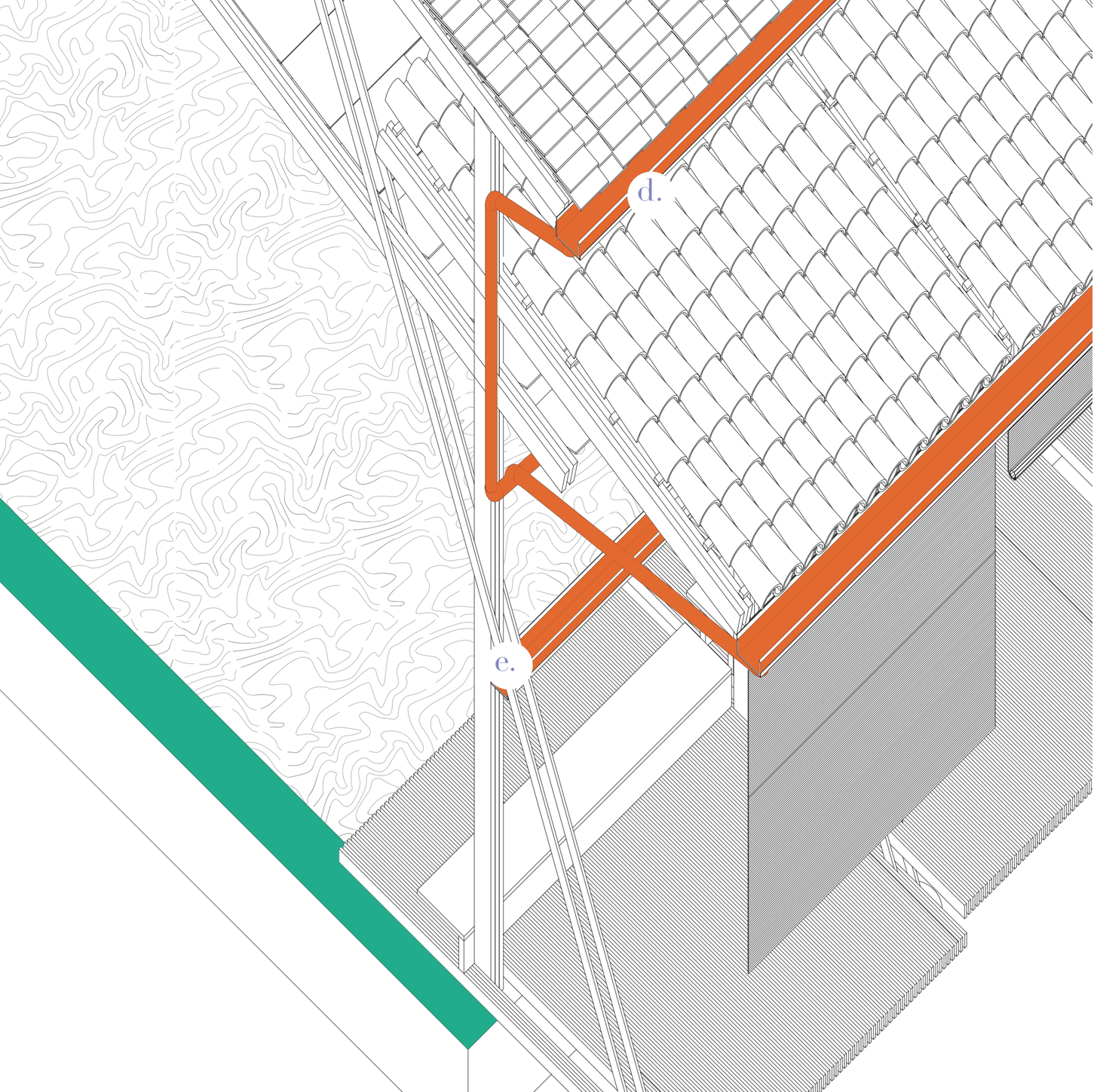
BATHING WATER

swimming pool

phytoepuraiton pool

regeneration pool

re-ingestion in water purification system + water from the river manzanares



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WATER SYSTEM

11. gutter system of the roofs: gutters collecting rainwater at the eaves of the roofs (d.) then redirecting rainwater in the gutter canal parralel to the pathway (e.) in order to reinject it into the system of the natural swimming pooll in the regeneration pool (f.)

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WATER SYSTEM

12. diffuse lightning roof with panels and movable curtains
(c.) with gutters above regeneration pool

GIVING ACCESS TO WATER AS A COLLECTIVE LEISURE GOOD