



# POLITECNICO

## MILANO 1863

Faculty of Architettura urbanistica ingegneria delle costruzioni  
Master of Science

SHATILI: MEDIEVAL REVIVAL

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2016 / 2017

The main idea of the thesis is to bring back life to almost abandoned medieval village Shatili, which is located in Georgia, a country on the coast of the Black Sea, which geographically, has been variously classified as being entirely part of Europe, or as having territory in both Europe and Asia.

The village is a unique complex of medieval-to-early modern fortresses and fortified dwellings, which functioned both as a residential area and a fortress guarding the northeastern outskirts of the country. The fortress consists of the terraced structures dominated by flat-roofed dwellings and watchtowers, built mainly between the 7th and 13th centuries, which cluster together to create a single chain of fortifications.

In 1950-1960, during industrialization period in the Soviet Union, the inhabitants of the mountain regions were forcibly resettled by the government to the cities. After this action, Khevsureti region became empty and lifeless. Some of them later returned to their homeland, but many villages then were deserted forever and above all, village was no longer self-sufficient.

In 1980, an innovative approach “bring back mountains to mountain people” was established. 11 new houses were built, approximately 15 families dwell in Sahtili during the summer, some of the houses function as guest houses as it is an important destination for tourists and mountain trekkers, but still, people cannot inhabit the village permanently because of cruel winter and lack of vital facilities.

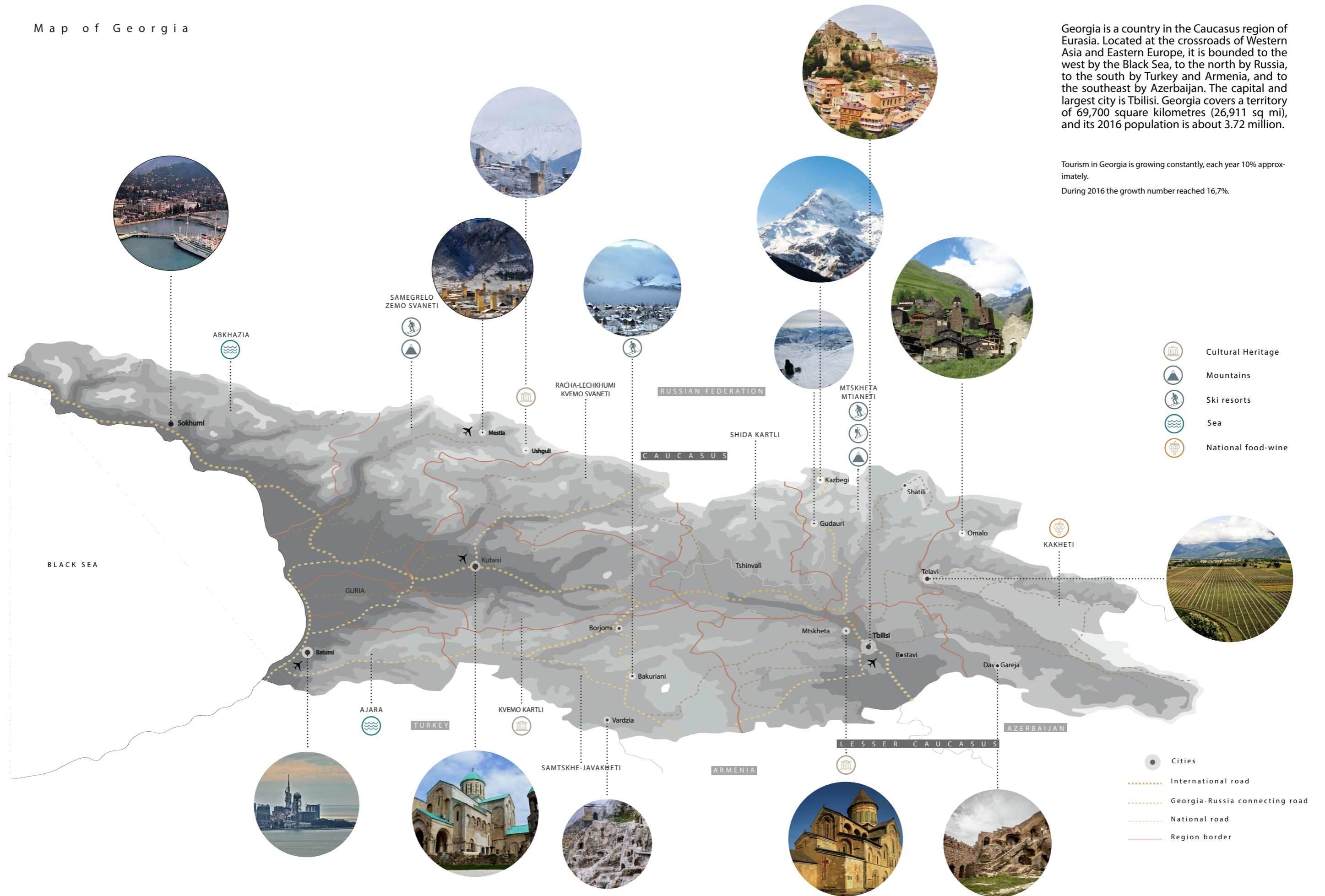
The project represents the connection of old Shatili complex with all new interventions. It consists of medieval architecture regeneration, inserting of new self-sufficient houses, vital functions, traditional handcraft manufacturing, attractions for tourists, farming and agriculture. The intent is to make the village work by natural resources as water, sun and biomass.

According to the project, all the chain of elements will create a sustainable self-sufficient village, it will bring back local resettled inhabitants, will attract more visitors, so the village will be lived during the hole year life cycle.

# Map of Georgia

Georgia is a country in the Caucasus region of Eurasia. Located at the crossroads of Western Asia and Eastern Europe, it is bounded to the west by the Black Sea, to the north by Russia, to the south by Turkey and Armenia, and to the southeast by Azerbaijan. The capital and largest city is Tbilisi. Georgia covers a territory of 69,700 square kilometres (26,911 sq mi), and its 2016 population is about 3.72 million.

Tourism in Georgia is growing constantly, each year 10% approximately. During 2016 the growth number reached 16,7%.

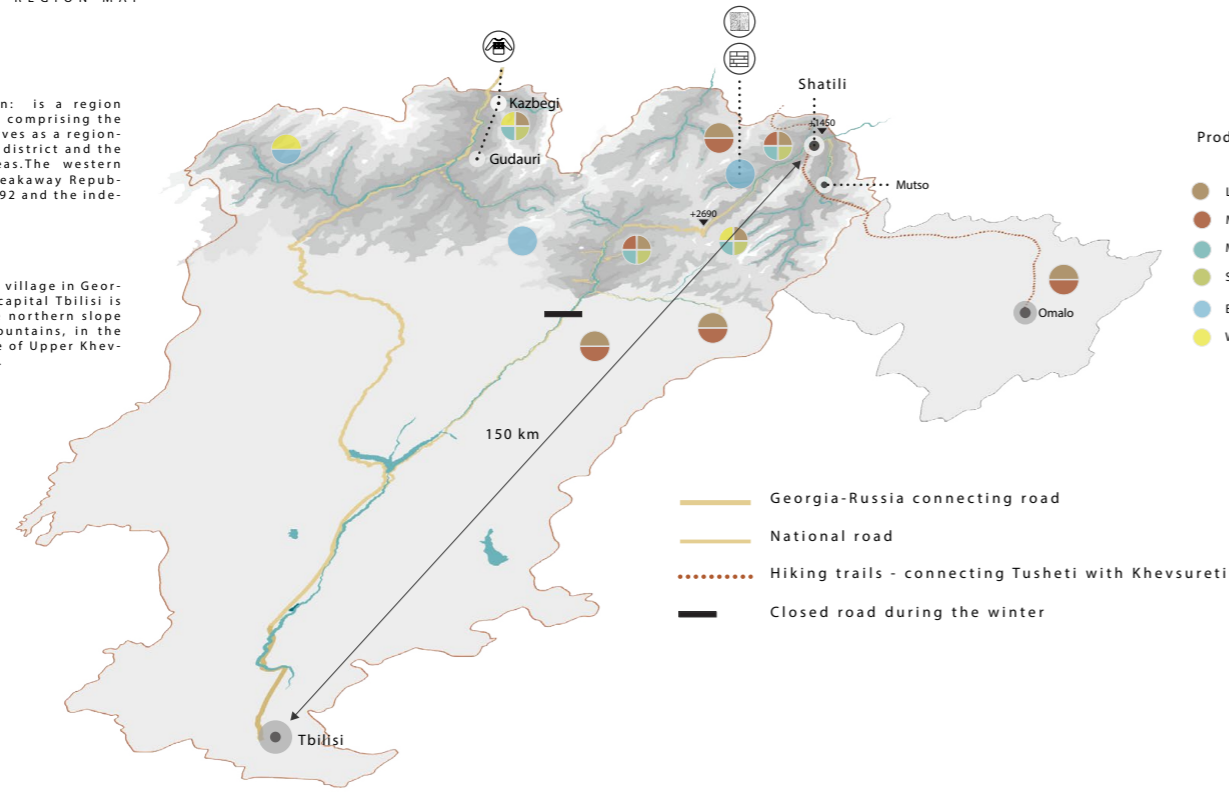




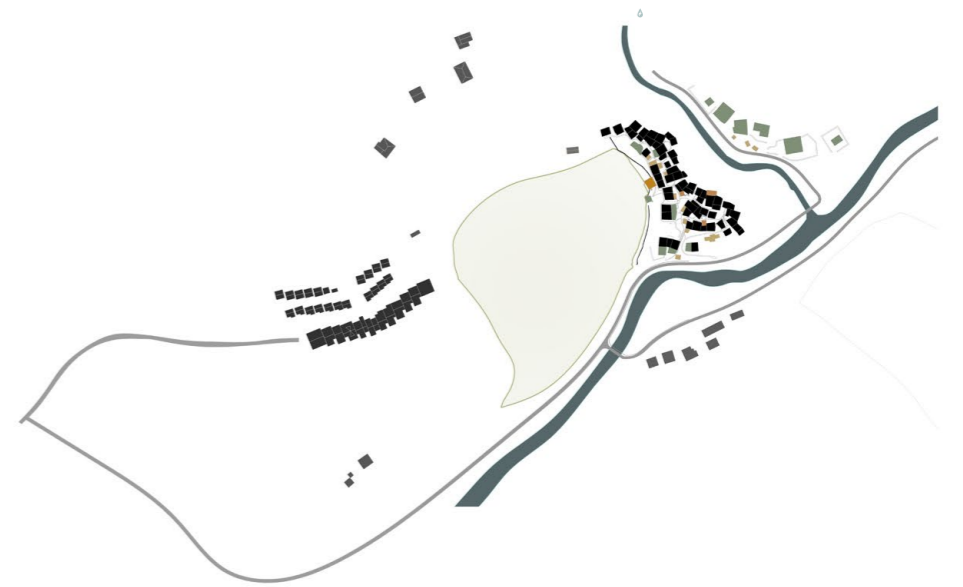
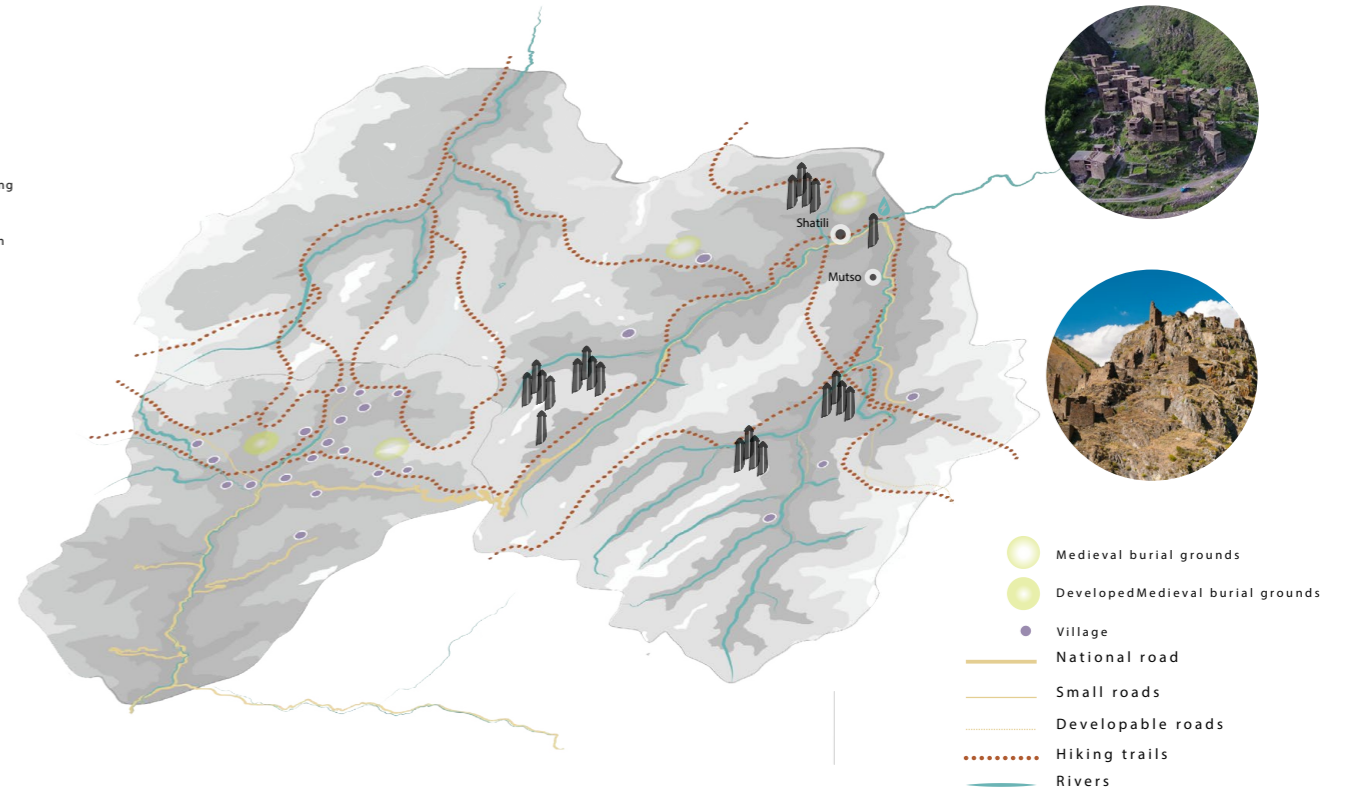
MTSKHETA - MTIANETI REGION MAP

Mtskheta-Mtianeti (Georgian: მთიანეთი) is a region (Mkhare) in eastern Georgia comprising the town of Mtskheta, which serves as a regional capital, together with its district and the adjoining mountainous areas. The western part is controlled by the breakaway Republic of South Ossetia since 1992 and the independence of Georgia.

Shatili is a historic highland village in Georgia. The distance from the capital Tbilisi is 150 km. It is located on the northern slope of the Greater Caucasus mountains, in the historical Georgian province of Upper Khevsureti at about 1400 meters.



KHEVSURETI MAP



Shatili in VII-XIII Century



Shatili was built in different periods, mainly from VII to XIII century. From the beginning it was a unique complex of medieval-to-early modern fortified fortresses complex. In that period the village was composed only by dwelling, which had different functions. They had common use spaces, saint zone, places for the cattle, defensive buildings.

Shatili in 1700-1900



IN this period the main change in the masterplan was the church building. It was a period when big interventions have been made for the christianity of Shatilians.

Shatili in 1940-1950



Industrialisation: During this period inhabitants of Shatili were forced to move from the mountains to the towns, because the government could not control the dwellers of the mountains and cheap workers were needed.

Shatili in 1970-1980



Give back the mountain to the mountain dwellers: This was new direction of the country. It was decided to restore and maintain the Cultural Heritage and build some houses for Shatilians that are willing to return and live in Shatili. During this period some of the structures were built by the dwellers themselves.





AKLDAMA

"Aklidama" - is a vault, which served as a structure for isolation during the illness. Mainly, in the Late feudal era (XVI-XVII), during the The Black Death, which was one of the most devastating pandemics in human history, in highland regions the population had authentic tradition. When someone had an incurable disease, he was going to "Aklidama", in case of recovery he was leaving "Aklidama" in other case the person had to stay there. Thanks to this tradition in mountains there was no massive mortality.



CLOTHING FOR BATTLES

Khevsurians were gaining iron and gold in small quantities. The iron was commonly used in agricultural fields, for weapon production and battle clothing.



PICTOGRAM

Pictograms are found on the walls of Old Shatili houses. The exact period is unknown, they could be of XII-XVI centuries, or even earlier. They describe different periods, because they have different images as: hunting scene, Mythical animals, Christian elements as Bolnisi cross.



SHEEPS

Because of harsh climate, the sheep was the most optimal finding. Shatilians were taking sheep to pasture in early spring and they had to overcome difficult paths and weather to reach summer pastures. Sheep was producing: Meat products, dairy products, wool, leather.



BARLEY

Because of the complex landscape, Shatilians had agricultural plots of small sizes. These plots were located away from houses, for having them protected during the battles in order not to lose the annual harvest. The main and common herbaceous plant was barley. Shatilians used to make bread and beer from barley. This tradition is still alive, and the inhabitants are producing beer during the religious holidays.



HORSES

During the sheep migration, was very difficult for people to walk around without a horse. This is the reason why did horses become so important for Khevsurians. Because of sharp landscape, during the years Khevsurian horse has been established as endemic specie. It is small, flexible and adapted for narrow trails and snowy terrains.



TRADITIONAL CLOTHING

Khevsurians, as all of mountain inhabitants, stood out with their knowledge in homoeopathy. The plants were used for production of well-known Khevsurian clothes and for medical purposes as well. Even after many years, Cloth of Khevsureti did not lose its color palette and shining, because it is manufactured by natural colors. Also North Caucasus and Eastern countries tradition of carpet weaving was established quickly among Khevsuretian's traditions.



LAW COURT

Khevsureti is considered as the birthplace of Georgian democracy. During the serfdom in feudalism era, Khevsurians had a communal system. They had established law court system in which the Convicted had the defense representative. This tradition underlines that democracy in Khevsureti was established earlier than in other regions of the country. For the court process, they had a place called "Sapekhvno", which was composed mainly of stone chairs.



THE STORY OF THE ANCIENT SETTLEMENT

Shatili is a historic highland village in Georgia. The distance from the capital Tbilisi is 150 km. It is located on the northern slope of the Greater Caucasus mountains. In the historical Georgian province of Upper Khevsureti at about 1400 meters. The village is a unique complex of medieval-to-early modern fortified fortresses complex. It is cluster of fortified flat-roofed stone dwellings and towers built mainly between the 7th and 13th centuries. It functioned both as a residential area and a fortress guarding the northeastern outskirts of the country. The village is very near the border with Chechnya and its inhabitants were constantly at risk from incursions in to their territory from their neighbors. The complex was unique from defensive point of view. Instead of a wooden roof these watch tower domiciles became flat-roofed to avoid assault by fiery arrows. When the enemy did attack, the villagers simply disappeared from the streets and the village closed itself down. Each house was connected with others via ladders or windows and movement was possible out of sight of antagonistic fire. There was plenty to eat even after the village was sealed. The houses extended to four or five storeys. On each level a different kind of livestock would be kept. The top floor was the living area for the family and the only one with anything more than tiny slits for windows. New buildings were built on terraces close to old ones so eventually the village encircled itself in stone, structures staggered from the outside in. It became a single fortification, each house could not withstand much outside pressure but became one component in a long and twisting chain. The last attack took place in 1813, after some days of fire attack, some of the important building were destroyed. After that incursion no major changes have occurred. In the beginning of 1950 dwellers of Shatili were forcibly resettled by the government to the cities, in order to employ mountain dwellers to have work and survive. After this action, Khevsureti region became empty and lifeless. Some of them later returned to their homeland, but many villages then were deserted forever and above all villages and its farming was no longer self-sufficient. Much of the population remained in the town forever, but still many of them has chosen semi-nomadic stay in the mountain with goods and cattle during the summer and return to town in the winter. In Khevsureti five six families settlement is considered as a big village, some villages have only one family or even one stubborn person, which does not leave his familiar place for decades. Protection of Shatili architectural complex started in 1970, when it was declared a cultural heritage monument and was added to the list of monuments that must be restored. Works were implemented on roofs, water management, balconies, terraces and internal structure reconstruction. For the second time, in 1998 other improvements on roofs, damaged walls, balconies, terraces, stairs, windows have been implemented, some foundations were reinforced by concrete.

From 2007 Shatili is included in Unesco world heritage sites tentative list.



### INFRASTRUCTURE

In order to reduce the isolation between the towns surrounding the region and shatlian inhabitants, and also to provide all the necessary infrastructural elements, such as small hospital, cultural centre, school, food shop, helipad and agricultural fields for food production were designed in the most flat land in order to link both old and new parts of the settlement.

### ANIMAL FARMING

On another side of the river Shatlian inhabitants used to keep animals, such as - sheep, horses, cows and so on. The buildings remained empty after the resettlement and the project foresees the requalification of the existing ruins to the former functionality.

## GENERAL MASTERPLAN - SHATILI DEVELOPMENT

SCALE 1:1000

### NEW HOUSING

The new village is designed instead of former new housing which was built between 1970-1980s in order to move Shatlians back to their roots. The way in which new housing appeared in the project has to show the dialogue between the old and new settlements: it is designed on the slope made of organic materials and introduces the tendencies of sustainable development.

### HOTEL / ENTERTAINMENT

The multifunctional complex inserted partially in the mountains combines in itself several functions:

- resort hotel
- conference room
- cinema room
- library
- sport activities
- spa

### AGRICULTURE

Due to the lack of the flat lands near Shatli the only two sites are appropriate for the maintaining of agricultural fields. That's why both sites (above and below old Shatli) are used for vegetable farming.

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MASTERPLAN \_ OLD VILLAGE SHATILI

SCALE 1:200

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Palangia Maria  
Supervisor:  
Nicolo Riva

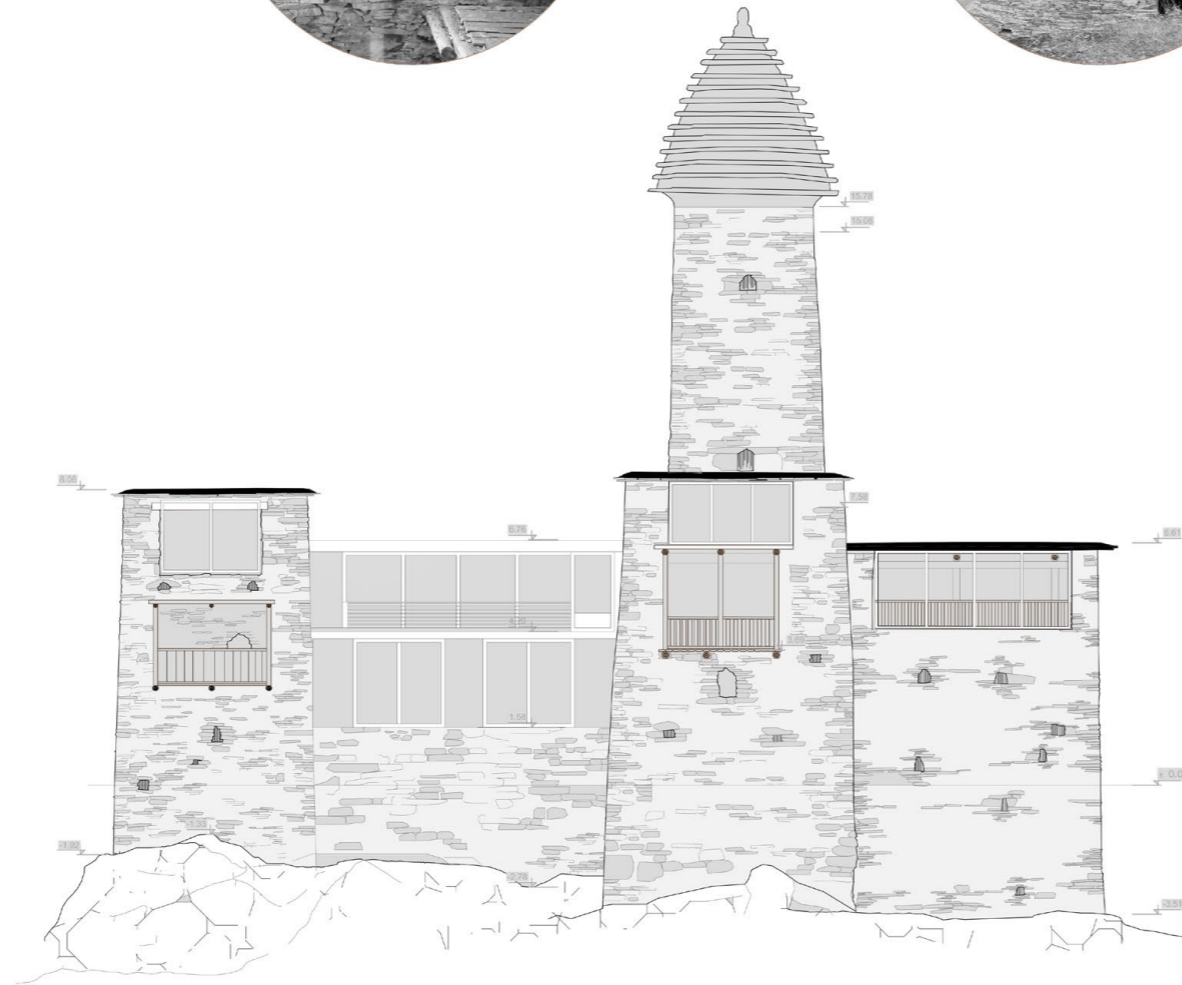
- [1] ETHNIC HOTEL
- [2] LEISURE
- [3] ETHNO MUSEUM
- [4] LOCAL BEER
- [5] INFO POINT







Shatli complex



INTERIOR OF THE HOUSE



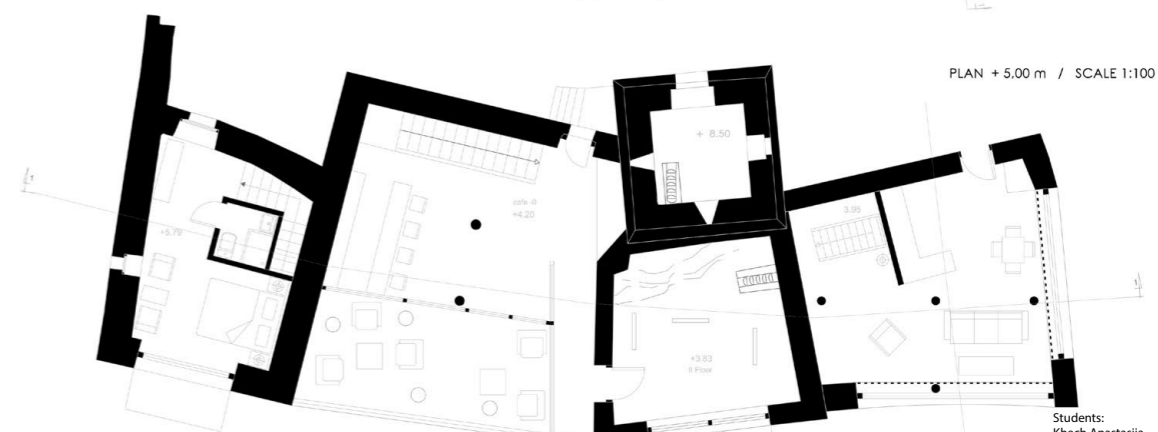
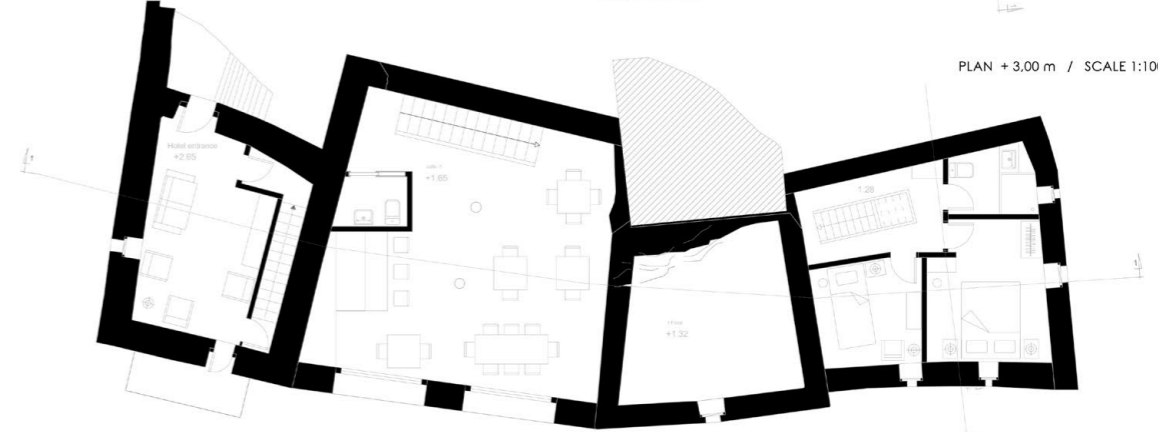
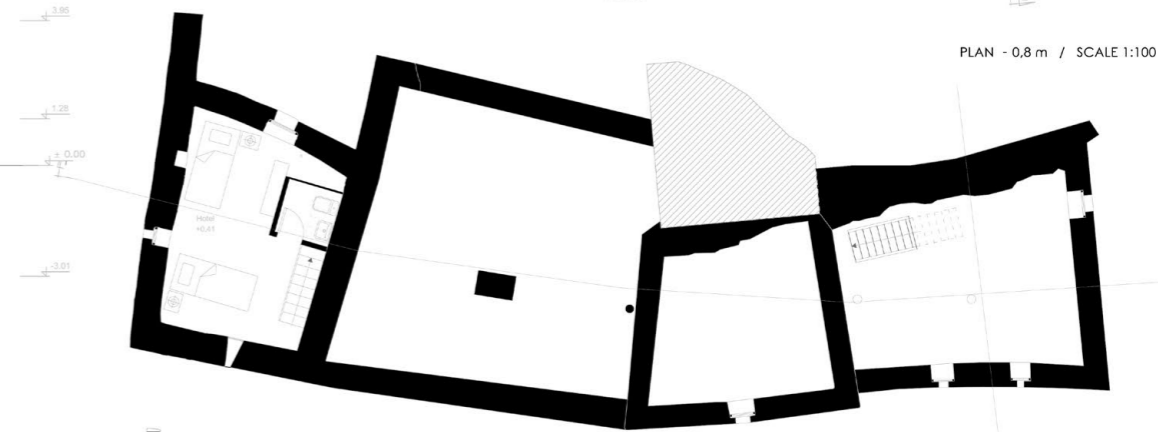
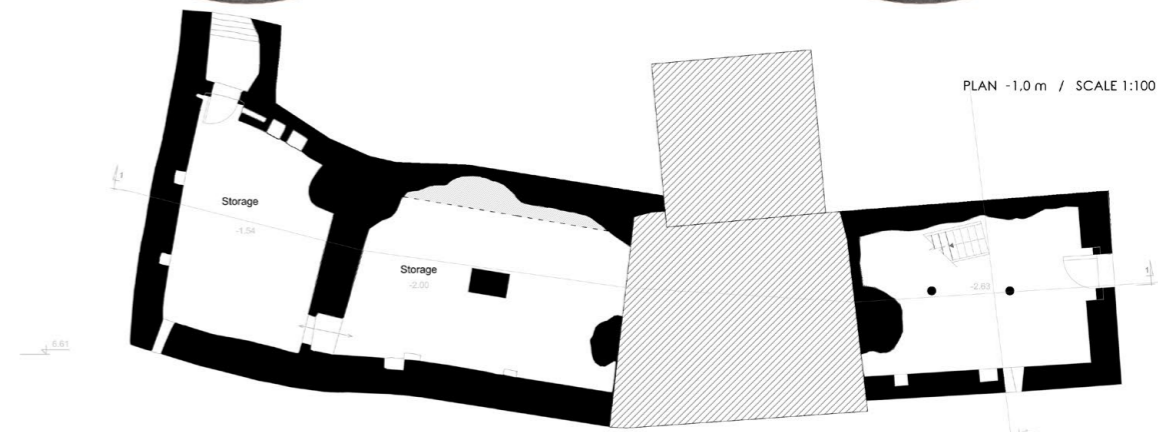
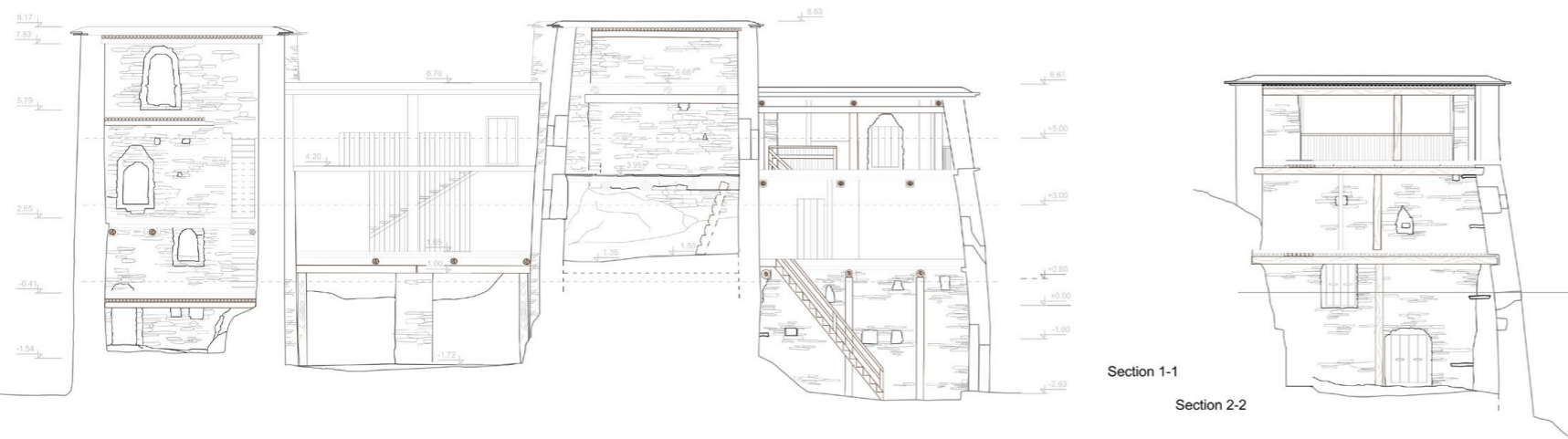
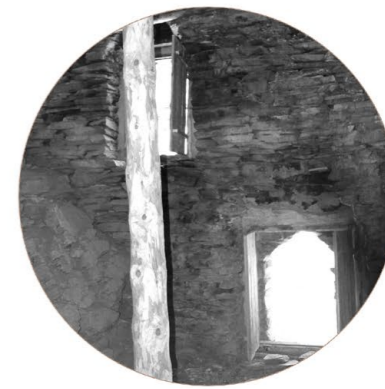
INTERIOR OF THE CAFE



RENEWAL OF THE HOUSE





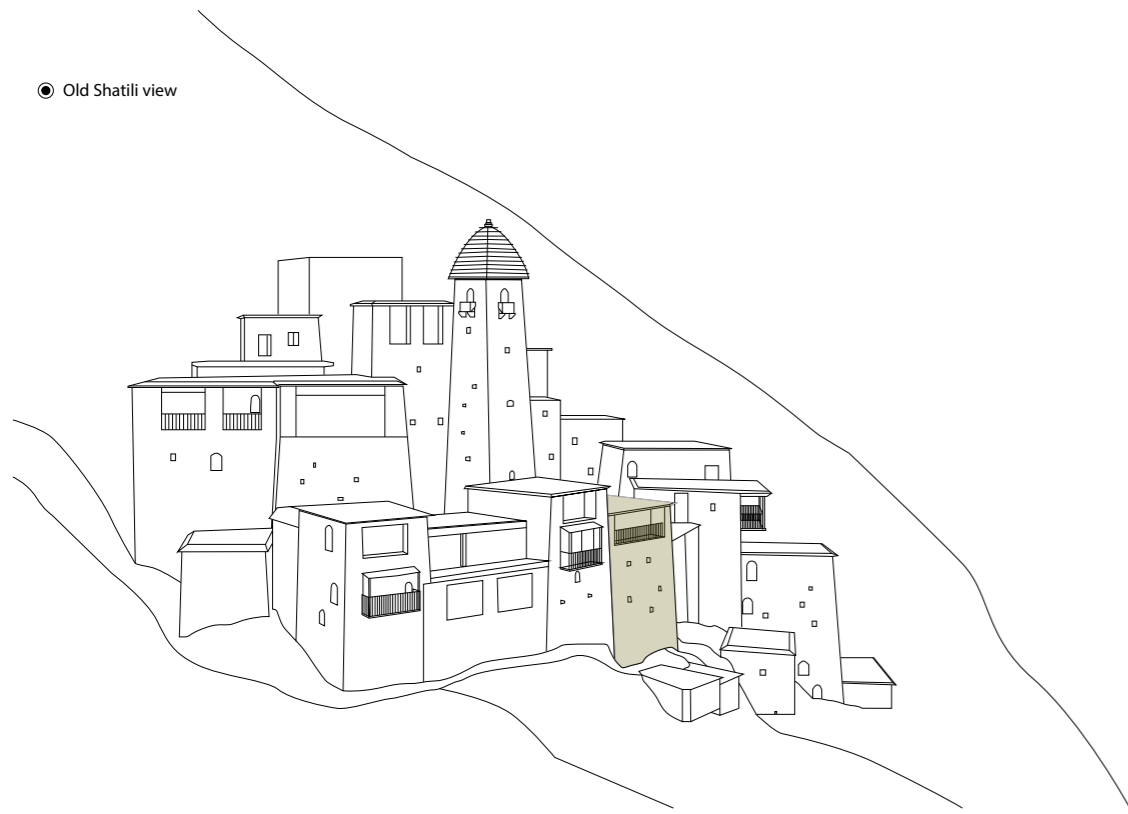


THE VIEW ON THE RESTORED HOUSE

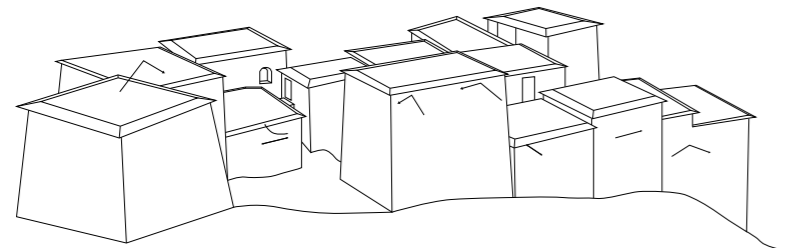




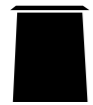
● Old Shatili view



● Human movement scheme  
● House's connection



Flat roof = avoid assault by fiery arrows easy connection between houses



SMALL DOORS = giving respect to the house owner defending from the enemy



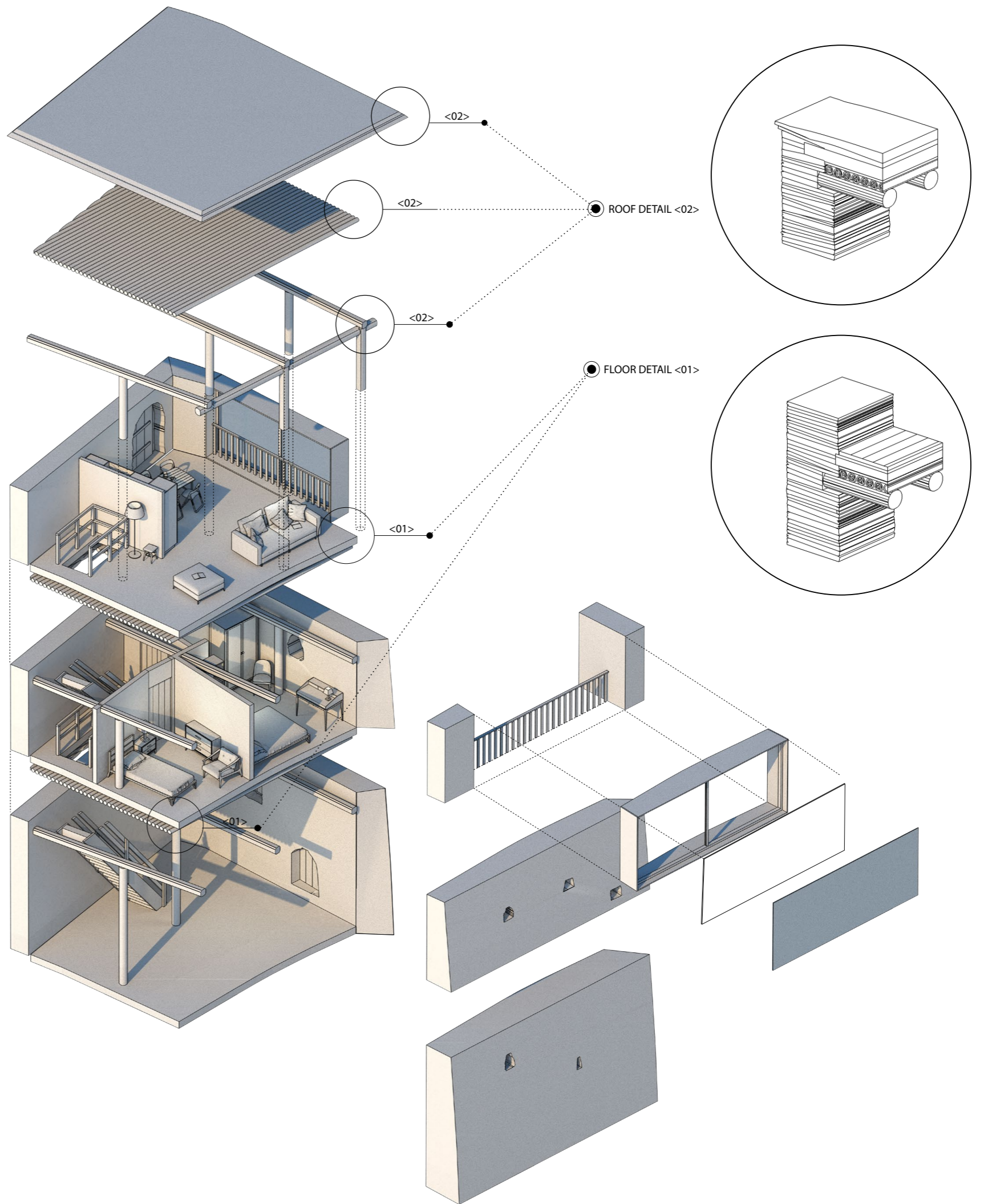
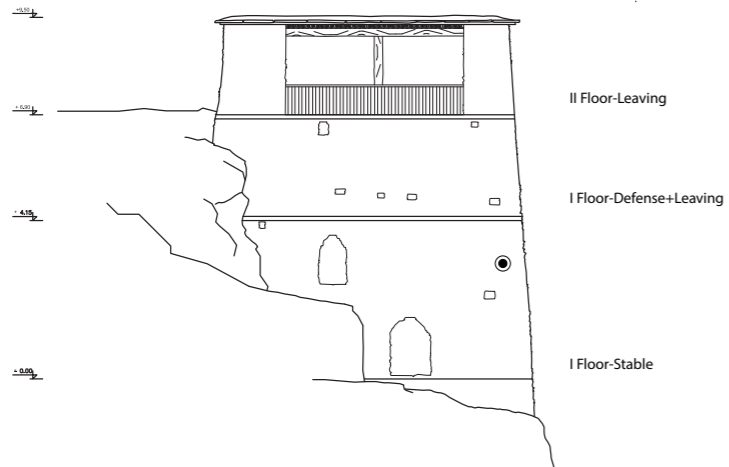
SMALL WINDOWS = connection between houses



SMALLEST WINDOWS = observe the surrounding during the battle shooting



● House Functional scheme before intervention



<02>

<02>

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● ROOF DETAIL <02>

● FLOOR DETAIL <01>





SECTION - NEW VILLAGE

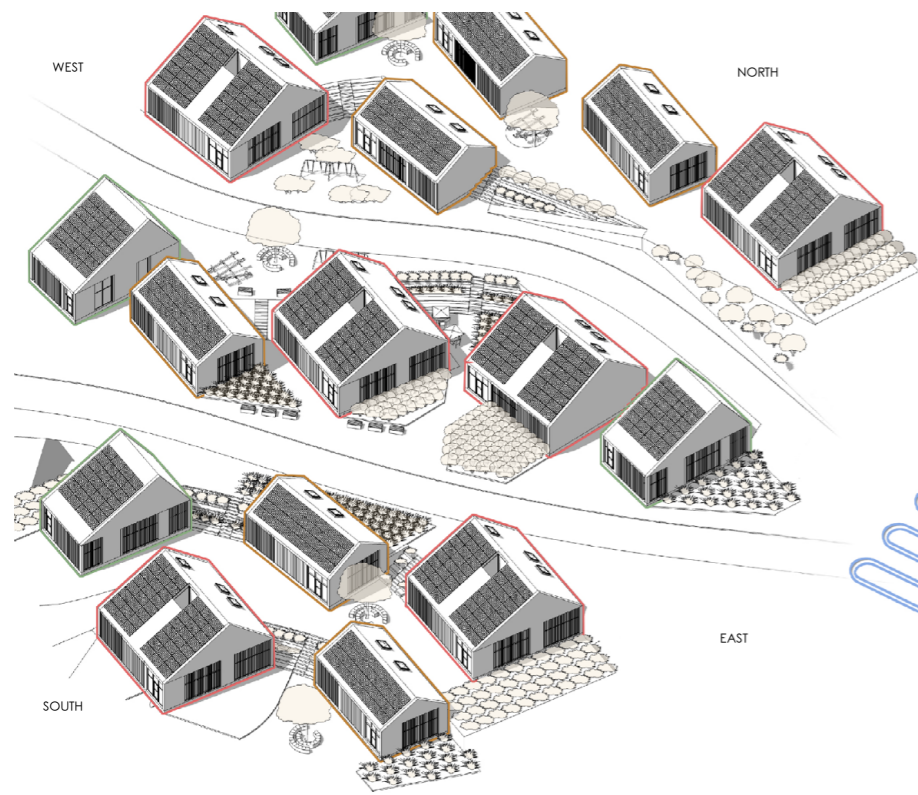
SCALE 1:200

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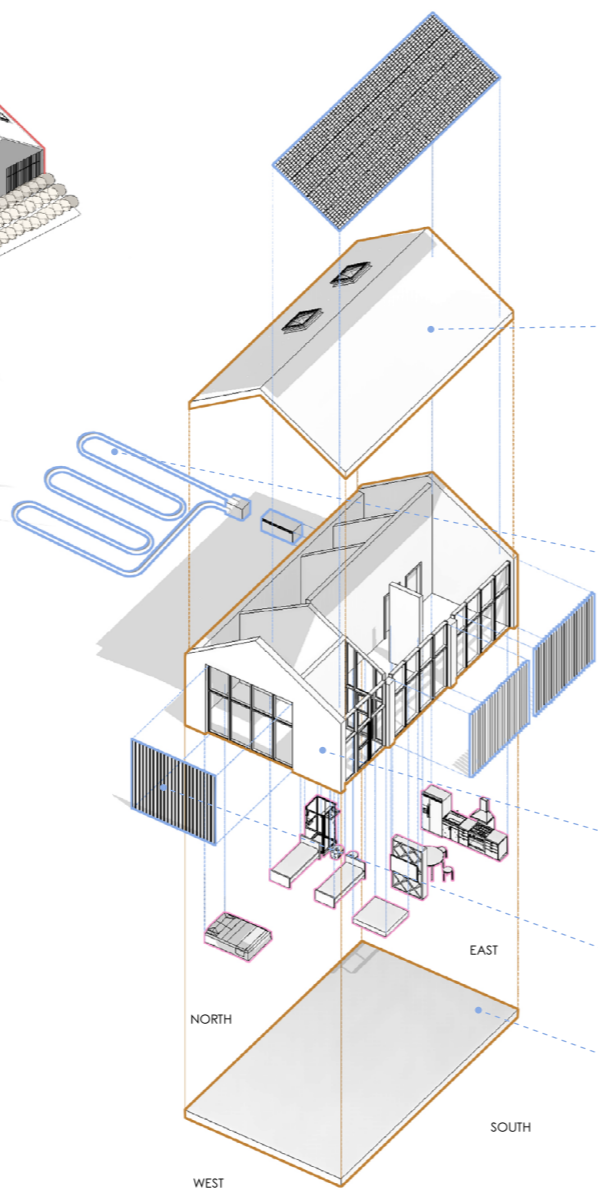
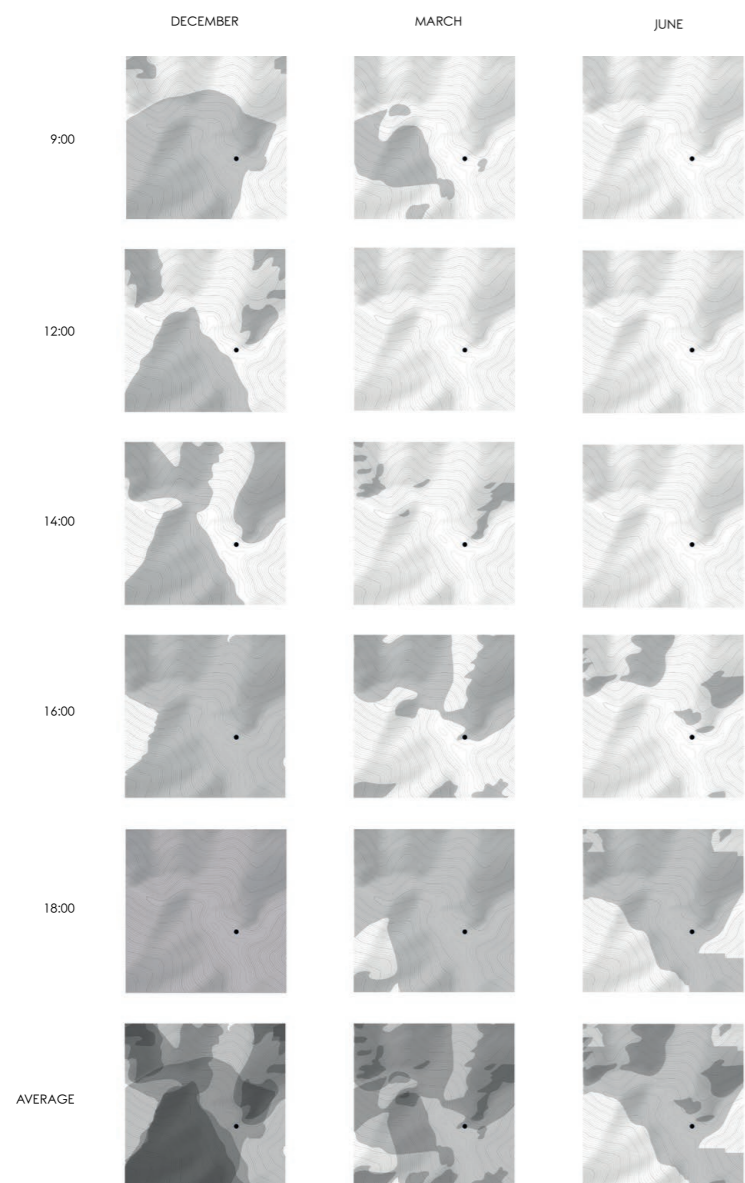




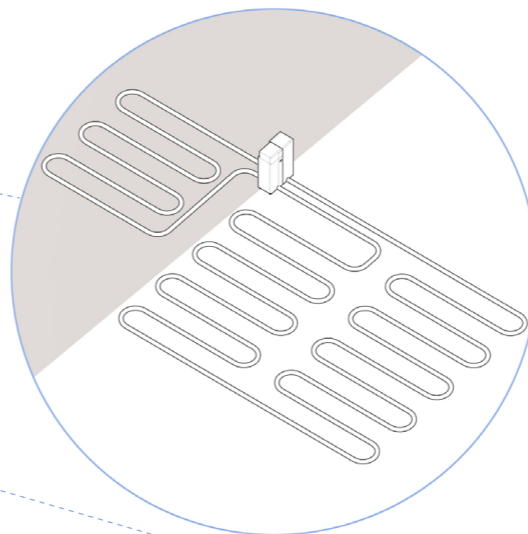




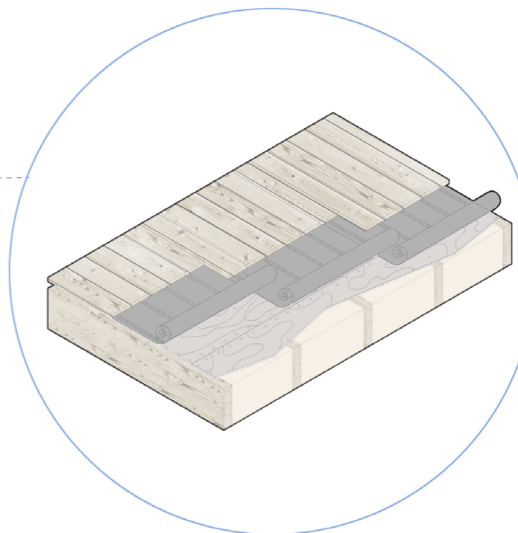
INSOLATION ANALYSIS



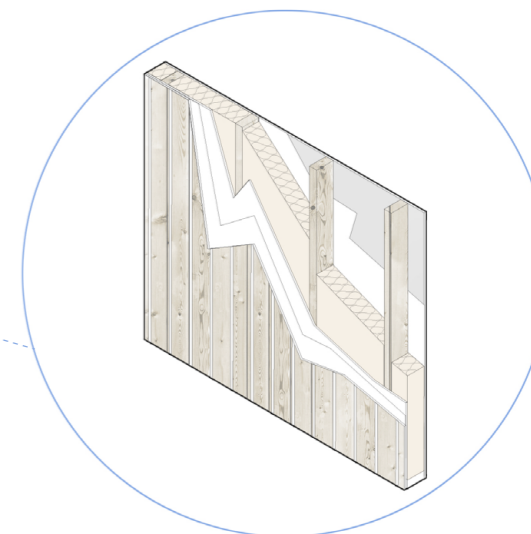
Heating / Cooling system with geothermal heat pump



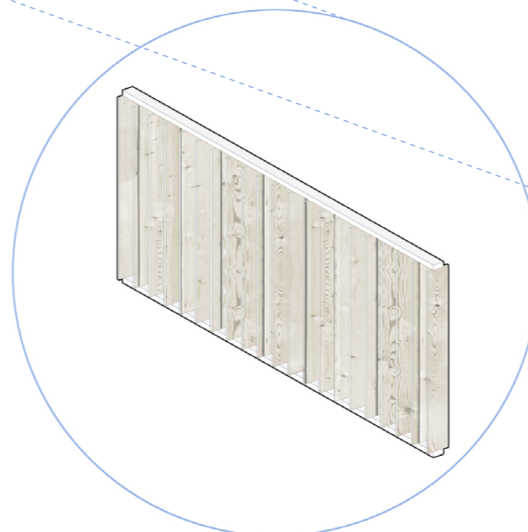
- Wooden siding
- Waterproofing
- Plywood for framing
- Heat insulation
- Wooden construction



- Wooden siding
- Building paper or other weatherresistive barrier
- Rigid foam insulation
- Wood studs
- Cavity insulation
- Vapor retarder
- Gypsum wallboard



Brise-soleil system for the facades



- Hardwood flooring
- Poured underlayment
- Rigid foam insulation
- Sleeper
- Tubing
- Insulation
- Basement

