

RETHINKING SHAKHARI BAZAR:
A UNIQUE URBAN SETTLEMENT OF OLD DHAKA,
BANGLADESH

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Rethinking Shakhari Bazar: A Unique Urban Settlement of Old Dhaka, Bangladesh

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Abstract

Shakhari Bazar is a three-hundred-year-old significant human settlement in the city of Dhaka, which was established during the Mughal period and later part of the British period. The Shakhari community, originating as a settlement of craftsmen who make Shakha from conch shells, has been living and carrying out their craftsmanship in this area for generations. About ten thousand people are living in about 4.6 acres of land area within one hundred and fifty-seven houses along both sides of a six-hundred-foot narrow alley. Each of the buildings has a unique architectural style derived from Mughal and British era. However, many unplanned modifications have been made over the period to many of these buildings, and many others have been demolished because of unlivable conditions. The Bangladeshi government has declared Shakhari Bazar as "Heritage Site" which prohibits the building owners to repair, rebuild or modify any parts of the buildings without permission from the government, but the authority has failed to provide enough resources for restoration and repairs. With a unique architectural style, built form, craft, and rich history, Shakhari Bazar has a scope to become an International Heritage Site and deserve attention for conservation. A community-based development plan and

framework should be carried out as part of conserving this area as well as to promote a healthy living condition. This research intends to find out the reasons behind the deterioration of the historic urban fabric of Shakhari Bazar, to analyze different techniques of conservation to find the optimal process that allows for community participation and cultural, as well as physical conservation.

Keywords: Shakhari Bazar, Heritage, Conservation, Craft, Community

Introduction

Shakhari Bazar is in the old part of Dhaka city. Dhaka is one of the world's most densely populated cities having 14.4 million people with a population density of 19,447 people/ square mile¹. Shakhari Bazar is Dhaka's one of the most densely populated areas. The history of Shakhari Bazar goes back to three hundred years when the city was formed during the Mughal period. The name of Shakhari Bazar came from the name of "Shakhari" artisans. They are specialized in making "Shakha" from conch shells that married Hindu women wear as a symbol of their marriage. Most of the Shakharis are Hindu, and they came to Dhaka during the latter part of the Mughal era and built their houses along a very narrow street near the Buriganga River. The buildings they constructed have significant structures and characteristics. Each of the building has unique motifs and features. The buildings are in general, narrow with single or multiple interior courtyards. The houses were generally built for one or two families and most buildings are two or three stories. However, as the families have grown, the properties had been divided multiples times. Many of the buildings are in dangerous conditions due to lack of repair. Some of the buildings are now shared among as many as twelve families, so there is severe overcrowding. Because of the unlivable conditions, many house owners had decided to tear down the old building and build six-seven story high buildings.

The Bangladesh Government has declared Shakhari Bazar as a heritage site, which

¹ Bangladesh Population. (2019-07-11). Retrieved 2019-08-27, from

<http://worldpopulationreview.com/countries/bangladesh/>

means building owners cannot demolish, repair, or modify buildings without the government's permission. However, the local people are indifferent towards the government's law to demolish old heritage buildings as the current law enforcing agencies does not pay proper attention in conserving those buildings rather than just passing the Heritage Law. The three-hundred-year-old settlement is losing its unique characteristics, which in a broader aspect means that Dhaka city is losing its heritage. The intentions of this research are to find out the reasons behind the deterioration of historic urban fabric of Shakhari Bazar, to analyze different techniques of conservation, and to determine what method of conservation is appropriate for Shakhari Bazar. In doing so I will also consider the community as well as the built environment: how can one conserve the community, how can community participate in the making a framework, how can architectural design support the community in the twenty-first century.

Methodology

The first step of the methodology will be analyzing different terminologies that are needed to understand the overall physical and abstract environment of the site. The second step would be comparing different techniques of conservation to find out later which would be more suited to apply. Three different case studies: Rehabilitation of Birzeit Historic District, Palestine, Old Havana Restoration, Cuba and Heritage Conservation in Pondicherry, India will be conducted to understand two different types of conservation techniques. The methodology of the research will also include collecting data from primary and secondary sources. Primary data collection method will involve direct physical site survey on Shakhari Bazar and questionnaire survey of the inhabitants accompanied by interview of urban planners, architects, and local governing representatives. The physical survey will construe taking photographs of various buildings of the site, recording videos and audios. This will help to understand the multilayered issues that are made of different traditional, cultural, and political events since

the origin of the area. To create a framework and architectural intervention, it is important to recognize the thorough history of the modifications of the urban landmarks, the craftsmen, and their crafts. The secondary data will be gathered by reading books published on history of Shakhari Bazar, such as *Dhaka Sriti Bisriti'r Nogori* (2009) by Muntassir Mamoon, *Notes on the Races, Casts and Trades of Eastern Bengal* (1883) by James Wise, *The Secretary of the Interior's Standards for the Treatment of Historic Properties With Guidelines For Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings* (2017) by U.S Department of the Interior National Park Service, newspaper articles, journals, and scholarly research papers. Recognizing the key terms, definitions, and techniques given by UNESCO is also important as the organization is also involved in the process of recognizing, designating, and conserving heritages worldwide.

Terminology

Heritage

Heritage is a strong word that is conceptually used and profusely suggestive and can be indistinctively applied to anything across time and space. In his book *The Heritage-scape: UNESCO, World Heritage, and Tourism* (2008), Michael A. Di Giovine has said, "It is a word whose significance changes with its myriad of invocations, designations or legislations. Depending on its usage, heritage can determine personal property, explicate unknown qualities, foster patriotism among disparate peoples, become a tourist destination, exacerbate geopolitical tensions, or call for help in the form of preservation, among other usages."² Heritage is a hereditary legacy that comprises of both intangible paradigm and physical items of a group of people. Heritage is passed down from generation to generation, sustained in the authentic form and preserved for the advantage of the generations to come.

The word "Tradition" goes hand in hand with the word "Heritage". Traditions are information, customs, beliefs, and statement

² Di Giovine, Michael, A. *The Heritage-scape: UNESCO, World Heritage, and*

Tourism. Lanham, MD: Lexington Books, 2009

that has been passed down from generation to generation. It is tradition that lays value in our heritage and culture. Heritage provides the sanctuary to the customs and age told traditions that have been treasured as the mode of passing down values.

UNESCO has been one of the main organizations that designates, promotes, and preserves heritage of all the world's people. Hence, it is also crucial to comprehend the definition of heritage given by UNESCO. In the Article 1 of the *Convention Concerning the Protection of the World Natural and Cultural Heritage* (1972), UNESCO identifies following as 'Cultural Heritage'.

- a. *Sites*: Works of people or the combined works of people and nature, and zones including archeological areas which has outstanding global value from the historical, ethnological, anthropological, or aesthetic point of view, i.e. Sundarbans, Bangladesh, San Antonio Mission Park, USA, The twentieth century Works of Frank Lloyd Wright, USA.
- b. *Monuments*: Architectural works, cave dwellings, inscriptions, works of monumental painting and sculptures, and blend of features which have global value from historic, scientific, and artistic points of view, i.e. The Statue of Liberty, USA, Taj Mahal, India: Architectural works, cave dwellings, inscriptions, works of monumental painting and sculptures, and blend of features which have global value from historic, scientific, and artistic points of view, i.e. The Statue of Liberty, USA, Taj Mahal, India.
- c. *Groups of Buildings*: Groups of separated or connected buildings which have enormous global value form historic, artistic, and scientific point of view because of their homogeneousness, their architecture, or their placement in landscape, i.e. The Historic City of Jaipur, India, Tabriz Historic Bazaar Complex, Iran, Residences of the Royal House of Savoy, Italy.

Tangible Culture

According to UNESCO, tangible heritage includes historic places and buildings, artifacts, monuments etc. which are worthy of preservation for the future. Tangible heritage includes objects that are architecturally, scientifically, archeologically, or technologically important of a specific culture. Tangible architecture is a way of recognizing the identity of the culture that is was erected upon. Preservation of Tangible Culture illustrates stories from past, recalls memories, and give people a way of tracing the past. In this case, the buildings of Shakhari Bazar can be identified as the Tangible Culture.

Intangible Culture

Intangible cultural heritage is a significant factor in sustaining cultural diversity in the face of mounting globalization. An understanding of intangible cultural heritage of different societies and communities inspires shared respect and helps with intercultural communication for the other ways of life. Intangible heritage is passed down from generations to generations, and it is rapidly refabricated by groups and communities, in response to their surrounding environment, their dialogue with nature, and their past. It provides people with a sense of continuity and identity and endorses admiration for cultural variety and human imagination. UNESCO states that Intangible Cultural Heritage are the fundamentals of human's cultural heritage that is called "intangible" because it is not related with any site or monument. In the later part of this paper illustrates different crafts have been practicing and sustaining in Shakhari Bazar from generations. From this point of view, the various crafts in Shakhari Bazar, specially the Shakha craft, uphold the Intangible Cultural Heritage of the area.

Discussion

The terminology related to conservation is complex and each term signifies a different attitude towards its subject and different long-term goal. It is necessary to analyze these distinctions to accurate the aims of the project.

Conservation

The terminology related to conservation is complex and each term signifies a different attitude towards its subject and different long-term goal. It is necessary to analyze these distinctions to accurately the aims of the project.

Preservation

Preservation is the process of applying necessary measures to sustain the existing integrity, form, and materials of a historic property. Preservation process includes primary measures to stabilize and protect the property and focuses on the maintenance and repair of historic features and materials rather than new construction and extensive replacements. The Standard for Preservation requires preservation of the greatest portion of historic fabric along with the buildings historic form. The guidance for Preservation starts with identifying the detailing and form of the architectural features and materials that are important in defining the historic importance and which must be retained to preserve the character. The other steps of Preservation are stabilizing, protecting, and maintaining the historic materials and features. Limited replacements may also be needed in case of extensive deterioration of historic features. For example, reservation allows repairing masonry by splicing, patching, or consolidating rather than removing masonry that could be repaired, stabilized, and conserved, or using any untested repair techniques or unskilled personnel by causing potential further damage to historic materials.

According to UNESCO, the focus of preservation is to avoid damage that to cause by accidental or environmental reasons, which carry a risk in the instant surroundings of the object to be preserved or conserved. It is also be noted that preventive measures and methods are not generally directly applied but designed to regulate the microclimatic situation of the environment with the goal of removing harmful elements, which may temporarily or permanently cause damage to the object. According to Dr. Luna

Khirfan, "preservation impedes future deterioration by maintaining the cultural conditions through minimal interference."³

The Standard for Preservation and UNESCO refers to the same goal of preservation. Preservation does not carry out extensive work of rebuilding and modification. The goal for preservation to take necessary protective works that will prevent future deterioration of historic parts or fabric

Rehabilitation

Rehabilitation is the process of making possible a compatible use for the property through alterations, repair, and additions while preserving those features or portions which convey is cultural, historical, or architectural values. The Rehabilitation Standards recognizes the need to modify a historic building to meet the continuing or new uses while preserving the building's historic characters. In rehabilitation process, at first the important materials and features of historic buildings that are extensively damages, deteriorated, or missing are identified. Later, those features replaced using either the same material or with compatible substitute materials. Rehabilitation allows modification and the creation of new addition, if essential for a continuing or new use for the historic building. But it is also be noted that, the alterations should not radically change or destroy character defining spaces, finished, features, or materials. For example: rehabilitation process allows repainting historically painted masonry features with such color that are suitable to the historic character of the building and district instead of using paint colors that is unsuited to the building.

According to ICOMOS, rehabilitation process is carried out to outspread a building's life or its economic feasibility. Rehabilitation process is more adaptive than conservation, but still will reserve most of the original features of the building. In another word, while protecting the heritage of the building, rehabilitation process allows some degree of

³ Khirfan, Luna. *World Heritage, Urban Design and Tourism: Three Cities in the Middle East*. Abingdon: Routledge

alteration, repair, rebuilding, remodeling, or modification.

In defining rehabilitation, The Rehabilitation Standard and ICOMOS refers to the same: the modification or alterations are allowed while keeping the heritage value of the building.

Restoration

Restoration is the process of accurately depicting the features, forms, and characteristics of a building as it appeared at a period by means of removing the features from other period in its history and rebuilding of missing features from the restoration period. The Restoration Standard allow for the portrayal of a building at a time in its history by reserving features, materials, spaces, and finishes from its period of importance and removing those from other periods. In restoration process, at first the materials and features from the restoration period are identified. Then some details and features from other period might be removed and replaced with details and features from restoration period, based on historic or physical documentation. For example, in restoration process, in-depth survey of existing window conditions from the restoration period should be done in earlier planning process for any kind of repair or upgrading work rather than replacing the window from restoration period only because of stuck sash, broken glass, peeling paint, or high infiltration.

According to ICOMOS, restoration is the process of going back to the original state or to the natural state as closely as possible by removing traces from different era, repairing damages, or rebuilding decayed parts without introducing new material.

Both the Restoration Standard and ICOMOS definition states the fact that restoration process is based on the admiration for the original material. Restoration comes into play when a building has lost its significance over time because of alteration or modification.

Reconstruction

Reconstruction is the process of representing, by means of new construction, features, the form, and the detailing of a non-surviving building, site, or object for the

purpose of duplicating its facade at a specific period and in its historic locations. The Reconstruction Standard establishes a restricted framework for rebuilding a non-surviving or vanished building with new materials. Reconstruction method is closely aligned with archeological research. Reconstruction focuses on accurate duplication of historic materials and features for interpretative purpose. Recreating the features of buildings or sites based on archeological findings are integral part of reconstruction work.

According to ICOMOS, reconstruction is the process of replicating the exact detail and form of a non-surviving building, structure, landscape, or site for the purpose of depicting its appearance at a definite era and its historic location. On the other hand, UNESCO relates reconstruction with authenticity. The term "Authenticity" has different interpretation depending on the organization involved. In this case, the term "Authenticity" has used as describing the original quality of a building or structure. According to UNESCO, the reconstruction process must meet the authenticity in material, its setting in natural or heritage landscape, design, or workmanship and only acceptable if supported by extensive and complete documentation of original form.

Redevelopment:

Redevelopments is the process of targeting old, decaying buildings with poor living conditions that may be re-built or re-planned. Redevelopment also indicates decrees which give cities or areas to establish agencies and give the agencies the authorities to solve the problems associated with urban decay. The authorities of these agencies include the authority to obtain real property, to develop and sell property without bidding, and the authority and accountability of relocating people who have interest in the properties acquired by the agencies. There are some variations of redevelopment process, such as urban infill, construction with denser land use or adaptive reuse.

The current situation of Shakhari Bazar has multifaceted problems. To solve all, selecting one technique might not be appropriate. Later with the detailed site, context, and

problem analysis, which kind of technique should be applied where will be determined.

Case studies

Rehabilitation of Birzeit Historic district, The West Bank, Palestine

Client: Birzeit Municipality, Palestine: Yousef Nasser, former mayor; Hasib Al Keileh, mayor; Musa Al Hajj, former director

Architects: Riwaq – Centre for Architectural Conservation

Site area: 40,640 m2
 Cost: US\$ 1.45 million
 Commission: June 2006
 Design: January 2007 – November 2011
 Construction: January 2008 – January 2012
 Occupancy: January 2009 – ongoing

The Birzeit Historic District is in North Ramallah of the West Bank, Palestine. It also the home to the Birzeit University. The history of this place goes back to Ottoman Era (1850-1917). Between 1948 and 1971, the British had dominion over Palestine. In Palestinian architecture, Ottoman and British influence is most noticeable. From 1948 - 1967, Palestine had been in war with Egypt and Jordan which resulted in destruction, dispersal, and dissemination many Palestinian Cultural Heritage sites. Israel's attempt to acquire political control over Palestine also resulted in demolition of many historic districts as well as Birzeit Historic District.

The objective of the rehabilitation project is to offer professional, technical and educational support to discover the possibilities of the cultural and historic context of Palestine which also includes asking the idea of "heritage conservation" could mean in that location. The vision of Birzeit Historic Center, put together with the community, the municipal council and civil society institutions was, "a lively center, attractive to its residents, investors and visitors, for a mixed used land use, respectful of its identity and cultural heritage." The project also targets at developing the physical, economic, social, and cultural atmosphere of the local people living in Birzeit, while at the same time safeguarding the historical and landscape and values. The project followed the process of rehabilitation.

The architects rebuilt and modified structure not the same way that what was there. Instead they took a modern approach to rehabilitate. They used materials that were found on site and used the same techniques which were used before. So, whenever someone visiting the place or villages, he/she can still feel the essence of what was there before, but not necessarily the exact same thing. Below there are some before and after photos of some rehabilitation process.



Fig. 1: upgrading the building environment



Fig. 2: Palestinian Church School before (left) and after (right)



Fig. 3: Birzeit Municipality Guest House before (left) and after (right)

In the process of rehabilitation of Birzeit Historic District, the authenticity and spirit of the historic structures were respected by

taking inspiration from local architectural features, using on-site materials, and promoting local crafts and techniques. The process has created a platform and framework to facilitate and encourage local initiative.

In the case of Shakhari Bazar, the process of rehabilitation can be applied to some parts. Rehabilitation of the old buildings can enable the inhabitants modify their houses in accordance with their need and at the same time this can also aid the architects and designers to represent the heritage value of the buildings in the twenty-first century.

Old Havana Restoration

The city of Havana, Cuba was founded by the Spanish explorers by the southwestern shore of Cuba in 16th Century. Over the next three centuries, Havana has flourished both architecturally and economically, and during 1950's it became one of the most modern cities in the Caribbean. In the buildings Moorish, Islamic, Spanish, and Hispanic influence can be found. During that time, Havana was the center for higher education and industrial production. When Fidel Castro came into power, he characterized Havana as an overdeveloped capital of an underdeveloped country and formed a revolution to modernize the rural areas to create a balance between cities and rural areas. In the late 1950's, half of the population were moved out of Havana and deterioration the historic city started to begin. The Cuban government neglected the historic center and focused on building factories and housing facilities in the city's outskirts.

In 1967, Eusebio Leal was designated as the City Historian. In 1968 he became the director of the Museum and he begins the restoration of the Capitan General 's Palace to house the City Museum, among other works. 1981 He became responsible for the restoration of the Historic Center. With the help of government and UNESCO, the restoration process began. The objective of the restoration process was to encourage the idea of conservation of the memory of the city. Their approach was to build the spaces, the buildings and repairing according to the historic references. In this process, culture and people were given the most importance. One of the main reasons for this restoration

was also to attract tourists to the city to give them the exact essence of the past and earn the money back to restore more buildings. Some before and after photos are given to show the before and after situation.



Fig 4: Convent of Belen before (left) and after (right) restoration

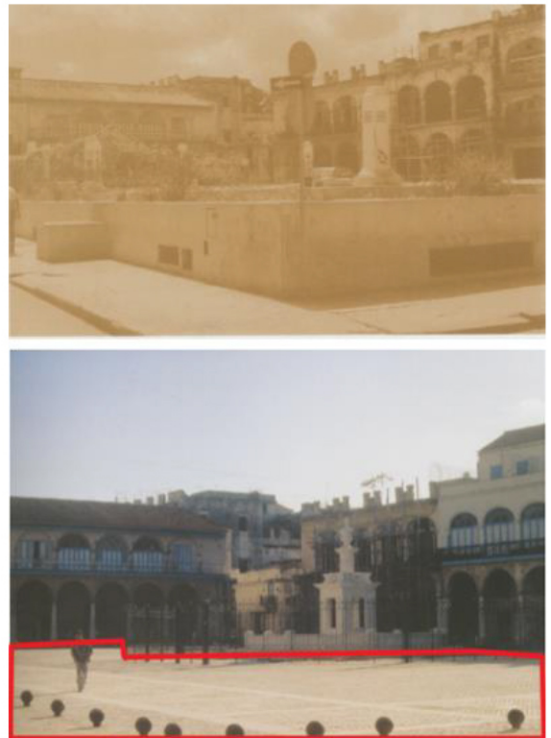


Fig 5: Plaza Veija before (top) and after (bottom) restoration

In the process of restoration of Old Havana, Cuba, the authenticity of the old structures was kept to original. The buildings were reconstructed in accordance with their historic references. the details of the

buildings were duplicated from the past references.

Reconstruction of the whole Shakhari Bazar may seem a valid way to conserve this area. But it should also be kept in mind that the area has changed over 300 years of time, population has increased, and not all the buildings are able to accommodate the inhabitants and their necessities in the twenty-first century. In that case, with careful physical survey and analysis should be carried out to determine which building should be reconstructed.

Heritage Conservation in Pondicherry, India

Responsible Organization: INTACH, Pondicherry in collaboration with Department of Tourism, Government of Pondicherry, Agence de l'Environnement et de la Maîtrise de l'Energie (ADEME)

Population: 241,773 inhabitants

Conserved Area: Old Town of Pondicherry (French and Tamil Settlement)

The recorded history of Pondicherry goes back to when traders from Roman Empire knew the city as Poduke. Late the city flourished as sea-port town during South Indian Chola Empire as Poducheri which French called Pondicherry. During that time Pondicherry was known as an eminent fortified town. The French influence is visible in the architectural structures of Pondicherry. The Old Town of Pondicherry can be clearly divided in to two major parts: Tamil Town and French Town. The French adapted their European style of architecture, while the Tamil architecture is more derived from the local vernacular.



Fig: Tamil (top) and French (bottom) neighborhood

In Pondicherry city, large number of iconic buildings are not found. Rather the city is known for the notable characteristic of domestic architecture. The architecture character is the outcome of hundreds of Tamil and French houses that form an ensemble. Due to increasing population and environmental pollution, the local people and tourists have expressed their concern about losing the architectural characteristic. Another reason for the deterioration is the construction of typical commercial or residential building which can be found at any corner in India.

To solve the problem of demolition of heritage buildings, INTACH came with some acts such as prohibiting demolition of heritage building, thorough documentation before undertaking any repairing work, charging penalties on those who demolish any heritage buildings, some set of traditional rules to follow for new construction to match the surroundings i.e. form based codes, and strict monitoring of work in progress. Some of the examples of this restoration process are illustrated below:

- a. *Model Street Restoration:* The traditional continuous verandah, common feature in South Asian buildings, was revived along the streets of Vysial Street in Tamil Town. The focus was not only given to the architectural features, but also to metal plaques, street lighting, other decorative features. Many of the existing buildings have been restored and been used for other purposes through adaptive reuse. Moreover, many of the owners of enlisted properties were provided with financial grants to assist them with the restoration and modernization process.

1. *77 Vysial Street:* The full front façade has been reconstructed to match with the surrounding.



Fig 6: before (left) and after (right) restoration

2. *48 Vysial Street*: The traditional Tamil doors and French inspired columns have been restored to its originality. After restoration process, the building has been used as Sussilabai School through adaptive reuse.



Fig 7: before (left) and after (right) restoration

In both Tamil and French Colony of Pondicherry, India, depending on the location, a form-based code has been applied. Uniform building characteristics were maintained in both colonies. After restorations, many buildings have acclimated adaptive reuse. One more feature that should be mentioned here is that some form of financial grants was allocated to the property owners to boost and encourage the restoration process.

Any form of intervention or conservation needs economic funds to carry out. Financial grants to the building owners of Shakhari Bazar may encourage them in conserving the area. Also, adaptive reuse of some building

can also generate some funds to do further conservation.

The History and Development of the Shakhari Bazar

Dhaka was famous for the Shakha made by the Shakharis. Shakhari Bazar, the living area of Shakhari, is still carrying the glory and memory of the past. James F. Norton Wise, the British Civil Surgeon, has given most of the information about the Shakharis in his book *Notes on the Races, Castes, and Trades by Bengals* (1883). According to him, legend says that the Shakharis came to East Bengal with King Ballal Sen and settled down in Bikrampur.⁴ When Dhaka became the capital during the Mughal period early in the seventeenth century, the Shakharis were induced to move to Dhaka from their old settlement with the offer of rent-free land in the new city. In the time of permanent settlement in 1973, the Shakharis were unable to show authentic documents and subjected to pay the ground rents like other citizens. According to Wise, in 1883 about 835 Shakharis were living in Shakhari Bazar. The land that was given to the Shakharis was not adequate. Therefore, the Shakharis formed a unique built form. Their houses were two stories high and about six feet wide in the front with at least thirty feet deep inside which was dictated by the piece of land given to them.

Crafts of Shakhari Bazar

The Heritage of Shakha craft

The Mohalla (neighborhood) belongs to Shakhari community, who borrowed the name from the craft of Shakha making from conch shells. The craft of Shakha making is one the oldest established "intangible" heritage. Shakha, the symbol of Hindu married women, are large seashell bangles with spiral decorations. While Shakhas are made from conch shells, today one can find plastic ones in the market. In addition to the use of conch shells to adornment, the whole conch shell is used as Vadya Shakha or trumpet to drive away evil spirit, and as vas vessel, Jal-Shankha for offering holy water in the rituals with various decorative motifs

⁴ Wise, James. *Notes on the Races, Cast, and Trades of Eastern Bengal*. London. Harrison and Sons.

crafted in the exterior of the shell. Almost every use of Shakha is related to Hindu religious rituals. While the widest part of the shell is cut down to make bangles, the edges are used to make finger rings and earrings. The by product, powder, is sold as skincare ingredients.

The craft of Shakha is carried and practiced through generations. Majority of the Shakharis are Hindu and followers of God Vishnu, Krishna, and Agastya Muni. According to Hindu legend, Agastya Muni killed Shankha Ashura, a formidable demon, with a semicircular saw. These types of semicircular saws were used to cut the seashells for many years.

As the name of the area suggests, the legacy of the area developed around its main craft, Shakha making. The raw materials of Shakha are imported from Srilanka as the craft needs a specialized kind of conch shell that is available only in the areas of ocean nearing this country. Price of 100 shells was around 1,100 BDT (\$13.75 approx.), whereas it was 40,000 BDT (\$500 approx.) in 2007.⁵ The heavier and thicker Shakhas are costlier than the thinner one. Machines have largely replaced the hand tools of the fabrication process. Designs can be modified according to client's choice and additionally gold or silver can be added for decorative purposes. However, the legacy of Shakha craft is diminishing day by day and many artisans had been shifted to making gold or silver ornament. Today, only 12-15 shops in Shakhari Bazar are involved in importing, manufacturing, and selling Shakha.

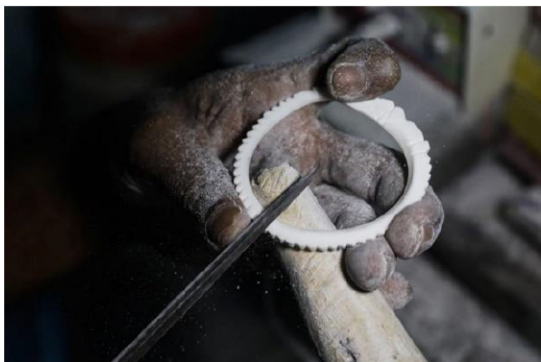


Fig 8: Elevations showing the location of Shakha Stores' location

The craft is perpetuated through apprenticeship system that is evident, both spatially and in practice. Masters take on apprentices that they are related to either through kinship or blood related, live with or nearby to their master's workshop and dwelling areas. Apprentices may be given small living space inside the workshop and at the back of the store near the open courtyards. It is mandatory thing for the apprentice to work under direct supervision of the master at least for three years before he can work without continuous guidance.

The Craft of Making Musical Instruments

Shakhari Bazar is home to another important artisan and commercial enterprise: music

⁵ Ahmed, Ifterkhar. "The Heritage of Shankharibazar: Peoples Participation in the Conservation Process to Promote Cultural

Tourism", *BRAC University Journal IV*, no. 2 (2007)

instruments. According to some classical musicians, the shops selling musical instruments Shakhari Bazar are some of the oldest and most prestigious in Bangladesh. Some of these stores have remained active in business since 1800s, they are known for their expertise. These businesses have been run by generations after generations of musical instrument makers. While the first generations used to make the instruments by themselves at their stores and houses, most of the current generation business runners only manage the stores and hire artisans and carpenters specialized in making musical instruments to make the instruments for them. Since they import huge amount of woods and ivory keys, most of the stores and workshops are located near to the main intersection of the street, where the road is broader, and it is easier to transport raw materials to the workshops as they are fabricating the instruments in their workshops.



Fig 9: Elevations showing Music Instruments Stores' location

The Craft of Sculpting

As the area is pre-dominantly occupied by local Hindu people with large number of temples and shrines, the street naturally hosts sculptors of Hindu deities. This scenario depicts a contrast from the rest of the city as majority of the population of Dhaka is Muslim. The master sculptor or "gurus" primarily design the sculpture and then supervise the initial stages of the statues. The work of sculptor making is seasonal as there are three main Hindi festivals in Bangladesh that needs large number of artisans, hence do not require large number of constant apprentices. Most of the apprentices seasonally migrate to this area from villages and contact the masters through kinship bonding. Like other apprentices around this area, the gurus also provide shelter and food for their apprentices and the buildings they work and live in are usually owned by them.

Clay, hay, coconut husk fibers, bamboo, and iron rods are transported through the narrow ally, and the sculpture stores are generally located away from the main road intersections. Since the sculptures of the deities are larger than human scale, more than one apprentices work in one sculpture and the workshops needs to be large to accommodate all. Several apprentices work on several parts of one sculpture and then joined in one statue. Daylight is very important for the precision of statue making and drying the statues. Most of the stores have open areas or the workshops have courtyards where the artisans make the parts in daylight.





Fig 10: Elevation showing location of Sculpting stores

The craft of Gold and Silver Jewelry

The goldsmiths and silversmiths of Shakhari Bazar come from generations of goldsmith and silversmiths who were famous in Indian sub-continent and their fame remained undamaged during British rule. Due to security reasons, the goldsmiths and silversmiths work in dark rooms at the back of the showrooms with limited to no access to the customers. The stores are also located away from the public eye. One of the other reasons is being at the adjoining proximity to the local police station which provides additional safety to the artisans and gold and silver jewelry shops.



Fig 11: Elevations showing locations of Gold and Silver Jewelry stores

The Religion and Culture

Most of the inhabitants of Shakhari Bazar are Hindu. Many temples are situated in this narrow street. Over the ages, Shakhari Bazar has been the center for Hindu religious festivities. They celebrate almost every Hindu festival. Jhulanjatra, Holi and Janmashtami festivals in the honor of Lord Krishna are being celebrated with great festivities. Poush-Shangkranti (last day of Bengali month Poush) or Shakrain and Makar-Shangkranti/ Chaitra Shangkranti (last day of Bengali calendar) are celebrated. Celebration of Durga Puja in Shakhari Bazar, the biggest Hindu celebration, has a unique characteristic. The mud statue of deity Durga is placed on a pedestal and generally, a Puja Mandap or temporary pavilion is built on ground in an open space to accommodate large crowd. In Shakhari Bazar, as the road is very narrow, the Mandaps are built over the road level and accessed by ladders so that the circulation of people and vehicles are not obstructed. The inhabitants of Shakhari Bazar are generally very religious in nature. Rarely any household can be found without at least one temple for daily prayer in it. If one household fails to keep a temple of their own, in that case three to four households keep a temple for daily worship.

RETHINKING SHAKHARI BAZAR 13



Built Environment

Apart from the Shakha craft, one thing that makes Shakhari bazar unique in respect to

other areas in Dhaka is the built form, the layout of the houses and the architectural style. For better understanding of the present site it is important to analyze these.

Compact Built Form

About 10,000 people are now living in about 4.6 acres of land in Shakhari Bazar. Along the six hundred feet long narrow street, there are 157 houses today. The narrow row houses share walls and the room arrangement allows very less ventilation and light inside. The houses are generally shared by seventy to eighty persons and three to four storied high. The narrowest building is about five feet wide with ninety feet long. In many cases, five to fifteen people share a single room even though the room can accommodate only one twin/full sized bed. The ceiling heights of these houses are about seven to eight feet. The narrow alleys are no adequate for hardly two people can pass side by side.



The Special Spatial Layout

Most of the buildings of Shakhari Bazar were built during the Mughal Period, and the rest were built during the early British rule in the Indian subcontinent. The linear pattern of the shop houses is result of special land allotment. Each original allottee might have received a plot with street frontage so that they can practice their business and live at the same time. However, the trading grew, their living quarters could expand only backwards up to seventy to ninety feet. Some security aspects such as, burglary or robbery might have been another force to have narrow street front and closely packed houses. In that way it was easier to seal or shut off two openings in the front and the back along the whole area if necessary. In that time, the houses were built for one or two households. But as their family grew, the plots were then subdivided among successors each requiring a street frontage.

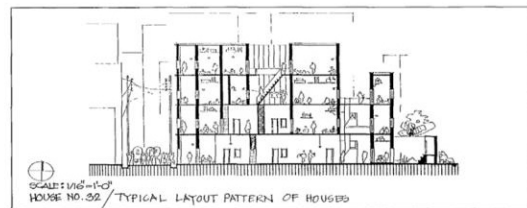
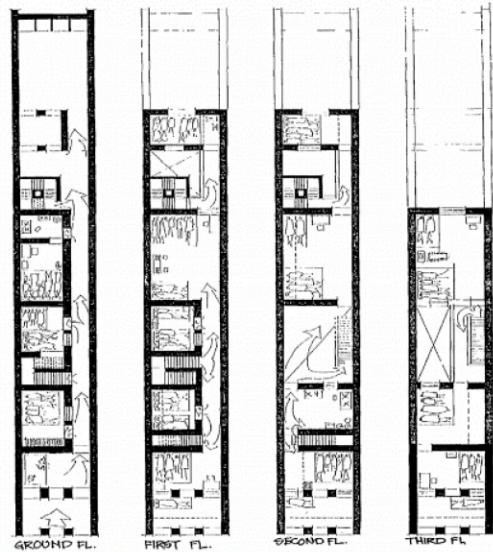
This may be another reason for narrow plot sizes.⁶



Architectural Style

The houses are divided into three major parts: the commercial part facing the street, the living quarters in the middle and the service block consisting of toilets and washing zone in the open courts at the rear part. A narrow linear corridor, generally twenty to thirty feet long, leads to the inner part of the buildings. Corridors are divided by a common wall to provide entrance to rooms and through stairways to the upper floors. Corridors are generally ended at the service zone at the rear. The rooms on the upper floors are mostly used for residential purposes. As no cooking space are provided separately, families cook in their bedrooms. Rooms are located along narrow corridors between two parallel common walls with staircases leading to the upper floor. The first and second floors are dark and poorly ventilated due to the absence of light-well. In addition to these, many of the houses contain a prayer room called Mandir on the topmost floor.

The narrow street frontage and extensive depth are the exceptional characteristics in common Shakhari Bazar houses. The narrow plot divisions have imposed restrictions on building expansions that people were left with very few choices. This typology came out to be an organic result of the socio-physical state which formed the community.



Section through a typical house showing height and disposition of rooms. Each house is occupied by many families.

The Diminishing Heritage of Shakhari Bazar

There are total 157 houses in Shakhari Bazar which are almost 200 to 300 years old. The buildings are two to three stories with some four stories. Many of the houses are facing serious threat of collapse due to their age, lack of repair and added load of new construction. As the house are very closely built to each other and many of them share common wall, when one of the houses are demolished and reconstructed, the foundation soil of adjacent houses become very vulnerable and unstable. On June 9, 2004, a five storied house collapsed killing nineteen people. Soon government had identified almost eight hundred houses of Old Dhaka as potentially dangerous and ninety of them are situated in Shakhari Bazar.⁷

⁶ Abu H. Imamuddin, Shamim Ara Hassan and WahidulAlam, "Shakhari Patti: A Unique Old City Settlement, Dhaka", *Architectural*

and Urban Conservation in the Islamic World (1990)

⁷ Ahmed, Ifterkhar. "The Heritage of Shankharibazar: Peoples Participation in the

Lack of repair and renovation, unplanned modification, natural dilapidation, dead load of unplanned construction over old structure, and live load of over population are the major threats that their houses are facing with heritage value. According to Bangladesh Bureau of Statistics, 21.8% of total population of Bangladesh lives below poverty line.⁸ Many of the local inhabitants live below the poverty line and it is impossible for them to repair and renovate their ancestral house. As a result, the houses are losing their elegance and decorative motifs day by day. As these narrow houses with less rooms can hardly accommodate the needs of multiple successors of these lands, many of the owners have sold their property to real estates in exchange for six to seven storied buildings, thus demolishing the old buildings. The real estate companies trade the land with the owner with either money or partial ownership of the new building or both. If this trend continues, there is a great chance that within few years this historic urban fabric will disappear.



In the narrow alley of Shakhari Bazar, there are no water hydrants along the road. As the road is very narrow, if any fire hazard occurs, there is no way that a fire truck can penetrate the street to take any action. To shed light on this matter, the recent fire hazard that took place in Chawkbazar can consider. Chawkbazar is part of Old Dhaka, which is very densely populated with closely built houses and narrow roads. On February 21, 2019 fire broke into a house with chemical storage on the first floor killing at least seventy-one people.⁹ As the road width was

not enough to move a fire truck, it took longer period to control the fire. In Shakhari Bazar, similar incidents can happen.

Analysis and general observation:

Stakeholders of different form can be found in Shakhari Bazar: the people living in there, the owners of the plots, the artisans practicing their craft, the Panchayat (the local authority for the Shakhari Bazar community), architects and urban planners, and the local and central government. Interest of each stakeholders are different from one another. For example, in recent years some architects and urban planners have started a movement to restore the buildings of Shakhari Bazar as they are. But the owners of plots and people living in those dilapidated buildings wants to demolish the old structure and erect new mid – high rise mixed-use buildings.

In 2009, Rajdhani Unnayan Katripokkho (RAJUK), the Capital Development Authority of the Government of Bangladesh, published a gazette listing around one hundred buildings and areas that are part of country's national heritage in Dhaka city. The listed heritage properties cannot be demolished, altered, repaired, or modified in the name of development without the approval from government's Nagar Unnayan (City Upgrade) Committee (NUC). A person can keep the ownership of the property but cannot develop or alter it. Shakhari Bazar has been enlisted as one of the heritage areas. In one hand the government is refraining the people of Shakhari Bazar from renovating, repairing, or redeveloping the buildings, on the other hand they are not providing enough economic resources to help the community to sustain their heritage. Also, local people blame some of the architects behind this Heritage Act. As a result, they have become violent towards the architects. They do not allow any people taking photographs of their property. They

Conservation Process to Promote Cultural Tourism", *BRAC University Journal* IV, no. 2 (2007)

⁸ "Poverty Rate Comes Down to 21.8% in 2018". *Dhaka Tribune*. May 13, 2019: <https://www.dhakatribune.com/bangladesh/nation/2019/05/13/poverty-rate-comes-down-to-21-8-in-2018>

⁹ Islam Babu, Aminul. "Chawkbazar Fire Death Toll Rises to 71". *Dhaka Tribune*. March 2, 2019: <https://www.dhakatribune.com/bangladesh/dhaka/2019/03/02/chawkbazar-fire-death-toll-rises-to-71>

fear that if those photographs find their way to media or newspaper, government and architects may come after their property, make them live in the old house, and refrain them from constructing building of their choice.

Besides, many of the properties have been listed as enemy property/ vested property that also refraining the people to redevelop or repair. The vested property act is a debatable law in Bangladesh that empowers government to seize property from anyone it considers as an enemy of the state. The law originated when after the division of Indian Sub-continent, many Hindus left Bangladesh. This law was primarily enforced by West Pakistani rulers when Bangladesh was under Pakistani ruling. People who left country and fled to India were declared as the Enemy of the Nation. After independence of Bangladesh in 1971, the name of act was changed to Vested Property Law. As Shakhari Bazar is predominantly inhabited by Hindu people, they think that the government has enacted both the vested property law and the Heritage law because they are minority people. Many people of Shakhari Bazar are living in a very poor living conditions as they are unable to repair or rebuild their house, eventually they started to violate the heritage act by giving their lands to real estates in exchange for six to seven story buildings with modern twenty-first century facilities.

As mentioned before, most of the inhabitants of Shakhari Bazar live below the poverty line. As an alternate income source, many people are leasing bed space to people who work there or in find of having a very low-cost accommodation. The population capacity of Shakhari Bazar has been exceeding in relation to road and housing capacity. the drainage and waste disposal system are failing miserably because of the absence of the proper waste disposal and drainage system. The cable tv, telephone and internet cables are also creating problems. These wires are hung and combined very dangerously. In case of any fire hazard, this can pose a serious threat of electrical short - circuit and electrocution.



As discussed before, there are many ways and techniques of conservation. In Shakhari Bazar, it may be impossible to apply only one technique. Rather the area requires more than one technique to be applied. During design phase, it will be decided which part of Shakhari Bazar needs which kind of intervention. The heart of Shakhari Bazar is the craftsmen. So, it is vital to have a framework to encourage them to keep practice their craft too. As the community is very strong in terms of culture, heritage, religion, and their way of living; it is also necessary sustain that in a safe and healthy environment.

Conclusion

The Shakha craft has given the name Shakhari Bazar to the area. It binds the artisans and people together along with culture, religion, and community. The history of Shakhari Bazar also combines the history of Dhaka city. Current living condition have deteriorated so much that it has become hazardous to individual and public health. It is high time to undertake necessary steps to continue upholding the heritage of the area. Government along with architects and urban planners need to come forwards for the conservation of this area as well as the craft. Techniques and frameworks for development and reformation should be designed to save Shakhari Bazar both historically and economically in twenty-first century by adopting a comprehensive approach of combining architectural intervention. By conducting detailed physical and theoretical research of this area and precedent studies, researcher can bring ideas to be adopted by policy makers, architects, and urban planners. With proper knowledge and information, professionals can move forward

and create the reminiscence of the past for the future generations.

Notes

1. Abu H. Imamuddin, Shamim Ara Hassan and Wahidul Alam, "Shakhari Patti: A Unique Old City Settlement, Dhaka", *Architectural and Urban Conservation in the Islamic World* (1990)
2. Ahmed, Ifterkhar. "The Heritage of Shankharibazar: Peoples Participation in the Conservation Process to Promote Cultural Tourism", *BRAC University Journal IV*, no. 2 (2007)
3. Ali, Tawfique. "100 Heritage Sites Listed, *The Daily Star*. February 05, 2009. <https://www.thedailystar.net/news-detail-74498>
4. Amiry, Saud. "Our Story." Riwaq. <https://www.riwaq.org/our-story>
5. Bangladesh Population. (2019-07-11). Retrieved 2019-08-27, from <http://worldpopulationreview.com/countries/bangladesh/>
6. Chacon, Vinicio. "The Soul of Each Country is It's Heritage." *Cubanow*, May 5, 2005. <http://www.eusebioleal.cu/entrevista/en-the-soul-of-each-country-is-its-heritage/>
7. Debosree Smita, Prianka. "Render Authenticity: revisiting Intangible Heritage of Reflect on Historic Structure Network." University of Waterloo, 2015
8. Di Giovine, Michael, A. *The Heritage-scape: UNESCO, World Heritage, and Tourism*. Lanham, MD: Lexington Books, 2009
9. Islam Babu, Aminul. "Chawkbazar Fire Death Toll Rises to 71". *Dhaka Tribune*. March 2, 2019. <https://www.dhakatribune.com/bangladesh/dhaka/2019/03/02/chawkbazar-fire-death-toll-rises-to-71>
10. Islam, A. K. M Kausarul. "Sharing Public Space in an Informally Developed Historic City –the Case of Old Dhaka." *Concordia University*, 2014
11. Islam, Shah Md. Rajbul. "Renewal of Old Dhaka: A Case Study on Shakhari Bazar."
12. Islam, Taimur, Homaira Zaman. "Conservation of a Historic Mohalla". *Star Weekend Magazine* 5 no. 91 (2006): <http://archive.thedailystar.net/magazine/2006/04/03/cover.htm>
13. Indian National Trust for Art and Cultural Heritage. *Architectural Heritage of Pondicherry*. Pondicherry. Sri Aurobindo Ashram Press, Pondicherry. April 2010. P 3-14
14. INTACH. *Heritage Conservation in Pondicherry*. India. Brihat Consultants (India) Pvt. Ltd March 2008. P 2-24.
15. Lamprakos, Michele. "Revitalization of Birzeit Historic Center". *On Site Review Report*, PAL 4022 (2013): 1-25
16. Mamoon, Muntasir. *Dhaka Sriti Bisritir Nogori Volume 3*. Dhaka: Anannya.
17. "Mission." INTACH Indian National Trust for Art and Cultural Heritage. <http://www.intach.org/about-mission.php>
18. Perrottet, Tony. "The man who saved Havana." *Smithsonian Magazine*, May 2018. <https://www.smithsonianmag.com/travel/man-who-saved-havana-180968735/?page=6>
19. "Poverty Rate Comes Down to 21.8% in 2018". *Dhaka Tribune*. May 13, 2019. <https://www.dhakatribune.com/bangladesh/nation/2019/05/13/poverty-rate-comes-down-to-21-8-in-2018>
20. Raitz von Frenzt, Nivedita. "All Things Old and Beautiful". *The Daily Star*. November 19, 2008. <https://www.thedailystar.net/news-detail-63920>
21. Rajdhani Unnayan Katripakkha (RAJUK). *Bangladesh Gazette, Extra*. Dhaka. February 12, 2009.
22. Stamm, Lauren. "Deconstructing the Dual City: Preservations and Tourism in La Habana Veija." *Senior Capstone Project*. Paper 385 (2014). The author elaborates the history, the conservation of Old Havana and the strategies to reintroduce tourism to boost the economy of Cuba
23. U.S. Department of the Interior National Park Service, Technical Preservation Services. *The Secretary of The Interior's Standards for The Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Building*. Washington, D.C. 2017.
24. Wise, James. *Notes on the Races, Cast, and Trades of Eastern Bengal*. London. Harrison and Sons.
25. Wolfie, Lisa Reynolds. "Contesting the Global Restoration and Neighborhood Identity in Old Havana." *Latin America Studies Association*. Miami. May 16-18, 2000. Pp 3-17
26. Zayt, Bir. "Revitalization of Birzeit Historic Center". *Aga Khan award for Architecture*. Geneva, 2013.

Addendum

Moumita Banik Mou

Miami University

Written Thesis to Design Thesis

In my written thesis, rather than deciding a clear design path, I focused on finding out the background, history, important facts related to the site. Through my written thesis, I found out that Shakhari Bazar is just not involved in Shakha craft and trading, there are other important crafts that are not frequently practiced in other part of the country. I also researched on two more potential sites as a class criterion: B.K Das road and Pyari Das Road. Both sites are a part of Old Dhaka. B.K. Das road is directly situated along the banks of Buriganga river and have got more variety of business practiced along the site. Pyari Das Road is mostly famous for boarding houses, lodges, and book printing business. One commonality among all three sites – Shakhari Bazar, B.K Das road, and Pyari Das Road – is all these sites are enriched with old historic buildings and rich history attached to these areas. But among all, Shakhari Bazar particularly stands out because of the unique crafts that are practices here for centuries and the compact built form. I have presented thesis paper along with my research on three sites at the Miami University Graduate Symposium and it was decided that Shakhari Bazar was going to be the site based on the threats and potential for future development of that area.

Following the Symposium, further research was conducted on site to analyze different aspects. As I done more analysis based on data found from GIS and physical survey, the problems became clearer. Shakhari Bazar is a very complex site with multi-faceted problems. So, coming up with single solution would not have been solve all the problems such as, craft deterioration, housing,

deteriorating quality of living, lack of social space for the inhabitants, sanitation etc. After pre-thesis studio reviews and with consultation with my committee, I decided on focusing more craft conservation and social space for the inhabitants. During winter 2019-20, I was able to visit the site by myself and understand the depth of the problems related to the sites. I found out, most of the houses are deprived of proper lighting and ventilation. Most of the house owners depend on the rents they get from renting the apartments apart from their business. So, they tend to maximize the built area much as possible, not leaving any space for ventilation or lighting. The narrow shapes of the plots do not allow them to leave proper setback from on building to another. As a result, the lower floors do not have proper light and ventilation. Finally, I decided to focus on three programs: craft school for craft conservation, housing, and green spaces for social gathering for the community. I wanted to present my thesis as an idea that can be presented to the community and can be modified over time with the community's participation.

Craft School

I wanted to design the craft school in a way that it provides an opportunity for the craftsmen to teach about their craft. The workshops and lecture rooms are arranged around a central courtyard. The overall form of the building was derived from analyzing sun-path diagram and wind direction of the neighborhood. Also building with central courtyard is a very common vernacular technique in Bangladesh as the climate is hot – humid nature. On the south-east corner, the building is staggered so that the central courtyard, the corridors, and the workshops can have natural light and ventilation. Staggered massing also can contribute to better vertical communication along the building.

The north and south façades of the building is inspired from decorative moldings of openings that can been seen in older historic buildings. On north façade, the depth of the moldings is relatively lesser than on the south side to allow more diffused light from north direction. On the southern façade, the greater depth of the moldings act as a shading device.

The craft school provides an opportunity to the craftsmen to pass along their knowledge to new generation and a place for dialogue between the community and people from outside.

Giving the rather smaller size of the plot, my intention was not to create workshops or classrooms for a huge number of people. My designed my workshop rooms rather small to accommodate maximum 5 people in each workshop. The craft that are being practiced here are mainly run by mentor – mentee system. Rather sizeable number of students in each workshop can help in maintain the quality of the system as well.

Housing

The street frontage of buildings along Shakhari Bazar Road ranges from 6' – 15'. I came with two different solutions for housing – solution for individual building plot with street frontage of more than 10' and solution for two amalgamated adjacent plot of street frontage not more than 20' combined.

For individual building plot with street frontage of more than 10', lightwells should be introduced for better lighting and ventilation. Using of exhaust fan along these light wells can maximize ventilation with opening on north and south façade.

For two amalgamated adjacent plot of street frontage not more than 20' combined, minimum 20% of plot area should be left as open courtyards along with light wells. It is advised to combine adjacent courtyards as well for larger useable space. Using traditional brick screens can maximize lighting and ventilation in staircases and ventilation in apartments along corridors.

For both housing type, the elevation facing the road should follow appropriate ratios and form-based codes. Also, the façades facing the road will have maximum three stories of straight road frontage, each additional story will give at least 5' setback from below. Maximum height of the buildings would be 60'.

Overall, from zoning point of view, for all building types, the first floor would be mixed used, second – fourth floor would be family housing and fifth – sixth floor would be hostel type living for workers on site/ bachelors.

Green Space for Social Gathering

There are little to no green space left on the back of the narrow buildings as the buildings have occupied land over time that were once acted as a setback from the adjacent neighborhood. Moreover, because of the large population living in this area and a huge number of people visiting here everyday for trading purpose, the narrow alley is always overcrowded and congested.

My intention was to maximize whatever green space left on the back of the site to act as a green space for gathering for the inhabitants or playground for the children or community space for holding different type of social, religious, communal activities. Also, I wanted to connect these green spaces with a pedestrian alley which in turn connects majority of the houses from the back and act as an access to back entry. These green spaces along with the interior courtyard can maximize the light and ventilation quality of the buildings.

Design Review Reflection

Following my design review, I have received valuable feedback from my thesis committee that can be applied to revisions of the future. It was suggested to further investigate on the programs of the craft school. It was also suggested to develop an adjoining roof connecting network along with the green network on road level to make the connection network spread along different vertical level and establishing that can be a very strong feature of my design proposal. Some jurors also suggested to address some of the unresolved problems such as sanitation, drainage, electric wiring, water clogging. They also suggested to develop the green space and road network to be developed further. Also, Susan Palladino- Piedmont asked about how as an architect, my role would be towards the new developed building fabric and materiality.

I think for the overall proposal, I received relatively positive comments about the issues and idea of solution I talked about. And I do believe that the green space – road – roof connection has potential to develop further.

In my defense, I would rather counter argue with the fact that the craft school might not be able to house all the suggested programs. Given the furniture diagram in each

workshop, the workshops are relatively small to accommodate maximum 5 persons. Also designing workshop spaces for larger number of trainees mean larger number of people coming into the site, where as the site is already overcrowded and congested. Drawing attention to larger number of people from outside can also hamper the overall ecology of the site as well.

To refer to Susan's question, my response was that through the suggested housing elevation, I am creating a framework that people can use a guideline to further decorate and take reference from the beautiful ornamented historic building fabric. I am proving a memory to neighborhood; the next step should have to be taken by the people.

Through my personal experience, survey and conversation with the people living in Shakhari Bazar, I found out that they are very much conservative about their neighborhood. They do not want anyone from outside to come and make all the decisions for themselves. At this point, I think it is my duty to clear my position in this thesis project. I did not want to act solely as an administrator, or architect, or urban planner, policy maker, or historian. My idea was to present some constructive idea to the community that can be further developed with the involvement of the community member, so that they feel welcomes in the process, not left out.

Conclusion

The entire thesis process was intense, but enjoyable. I strongly feel that after studying almost two years on this site and the people, I have just started scratching the surface of my design proposal. More importantly, the process has given me the opportunity to learn more about the site and community and better understanding of the social, political, economical issues existing in this area. Moreover, this process has given me the opportunity to realize my passion for urban design and studies which I am very much looking forward to pursuing in future.

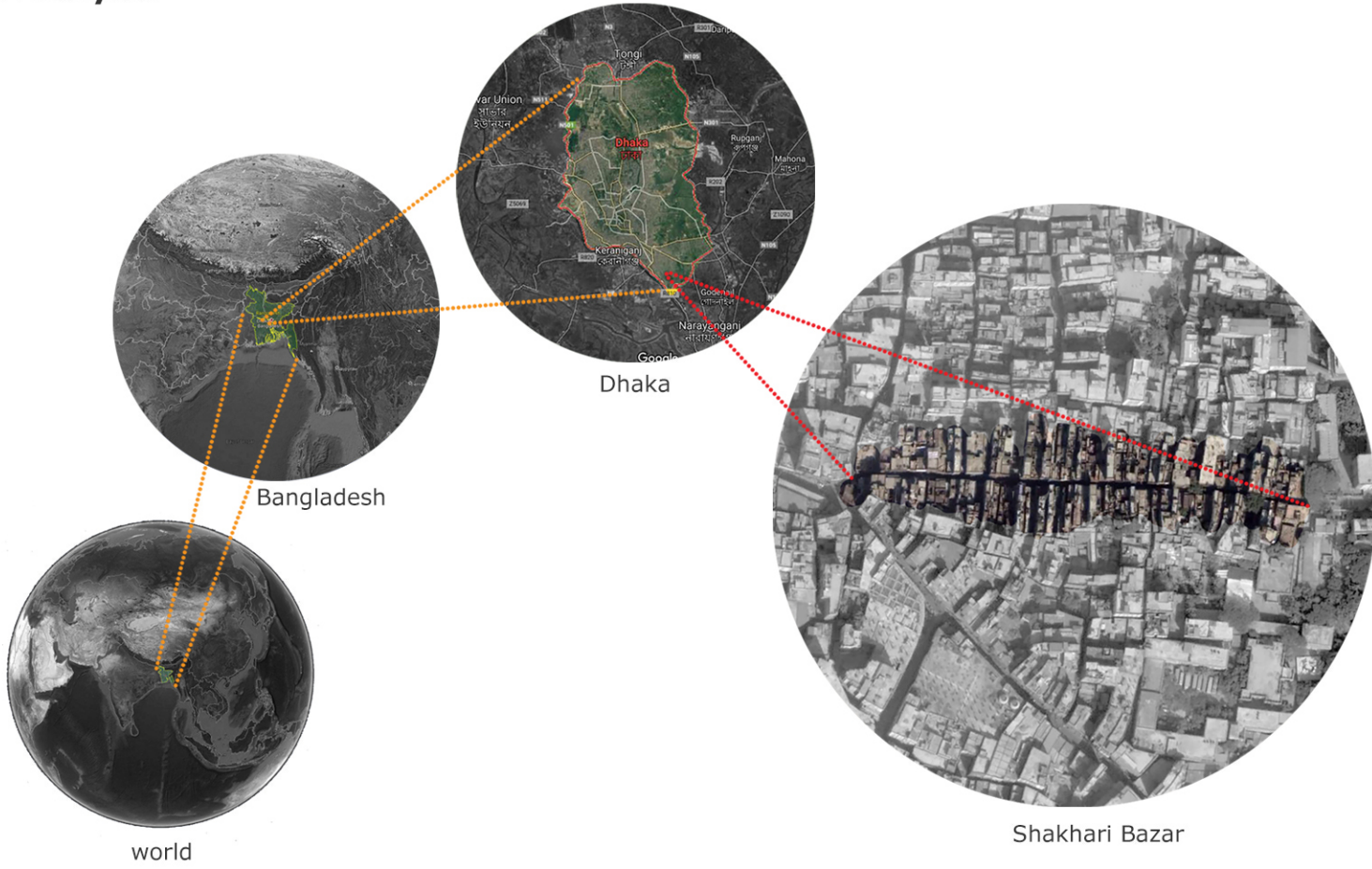
When I started writing the thesis paper, I was more focused on finding the background, the cause of deterioration, and some case studies that had tackled deterioration of urban/ rural fabrics and their techniques. But as I started

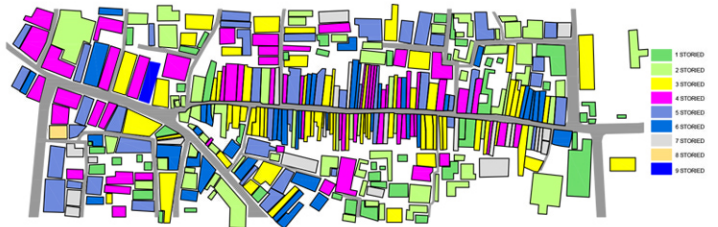
analyzing the data, the more I visited the site, and talked to the people, the more it became clear to me that preserving the building fabric will not necessarily be only solution to this site. The problem lies deep with the economy and poor living standards. The introduction of craft school and better housing can revitalize the economy of the overall area. The framework for elevations offers opportunity to retain the loss of beautifully ornamented urban fabric. Through research I have found documents about how the green spaces along the site has been lost by the aggression of extension to fulfill housing needs and earn some revenue from leasing apartments and living quarters. Once the green spaces, the interior courtyard served as shared gathering space for the community, later became obsolete. The communal green spaces and courtyards also offers communal bonding among the inhabitants apart from being a source of light and ventilations.

I appreciate all the thoughtful comments and critiques I received during the committee reviews and final defense. I am positive that with the help of these critiques and comments, I will be able to further develop my thesis in future and present in from of Shakhari Bazar community.

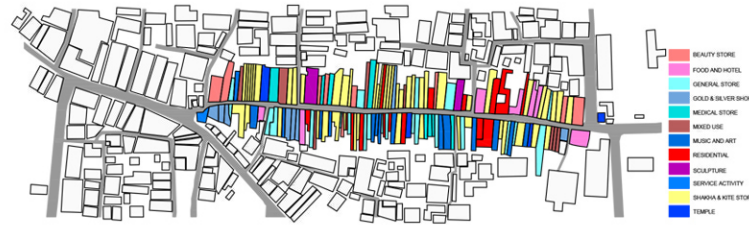
While Shakhari Bazar was my focus of research, but it is not the only area in the world with multi-faceted problems of deterioration. My thesis journey has made me realize that small incentives in micro level can have immense impact in revitalizing a community. My thesis journey has inspired me to research about the community, culture, their living pattern, and policies that can improve their way of living.

Site Analysis

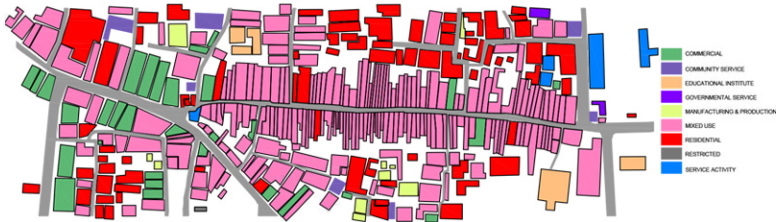




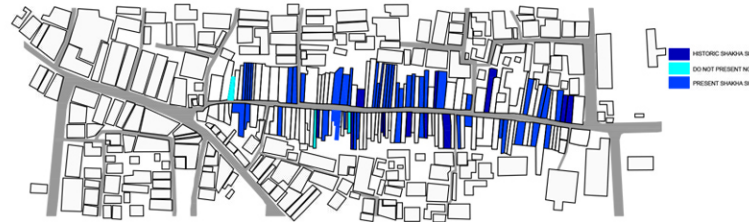
HEIGHT OF THE BUILDINGS



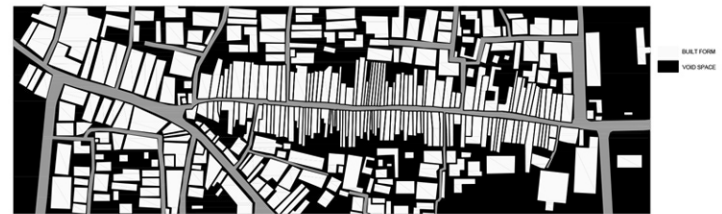
LANDUSE PATTERN OF THE SITE



LANDUSE PATTERN OF THE ADJACENT AREA



OWNERSHIP PATTERN

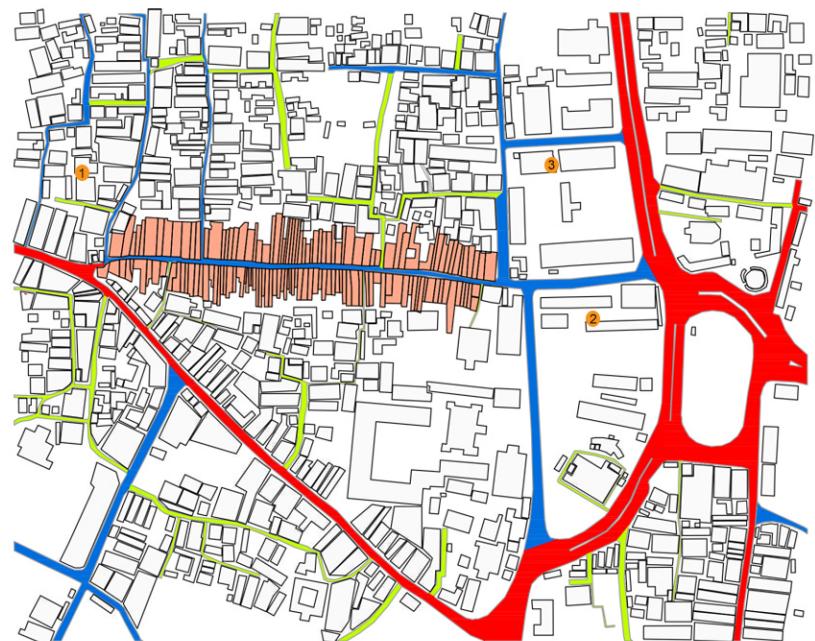


SOLID VS VOID SPACE

Site Access



The average width of ShaKhari Bazar Road is 12 feet. The road width allows pedestrians, non-motorized vehicles, light motorized vehicles and ambulance. Because of the narrow width, fire tracks can not enter to the site in case of emergency.



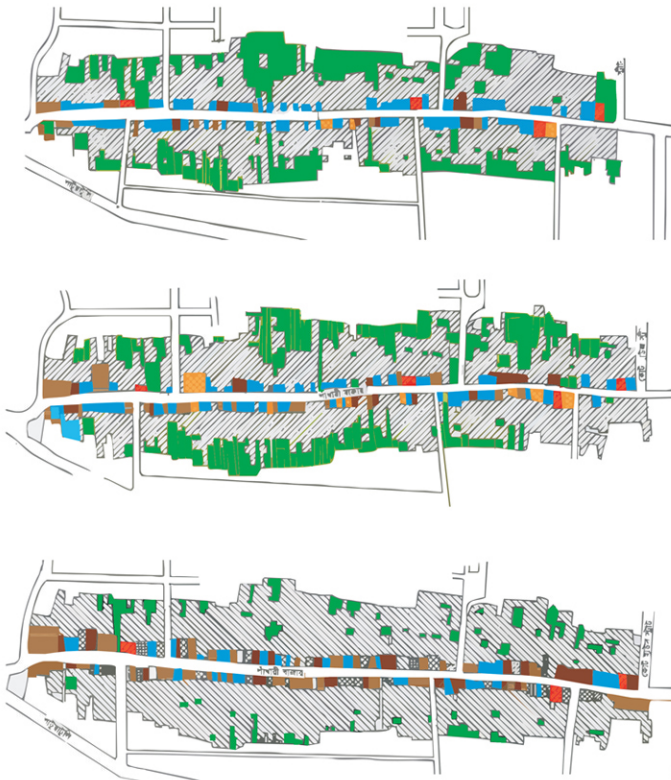
ACCESSIBILITY

■ ACCESSIBLE TO FIRE TRUCK AND AMBULANCE
 ■ ACCESSIBLE TO AMBULANCE
 ■ INACCESSIBLE TO ANY VEHICLE

Shakhari Bazar and Location of Important Structures in the Neighborhood



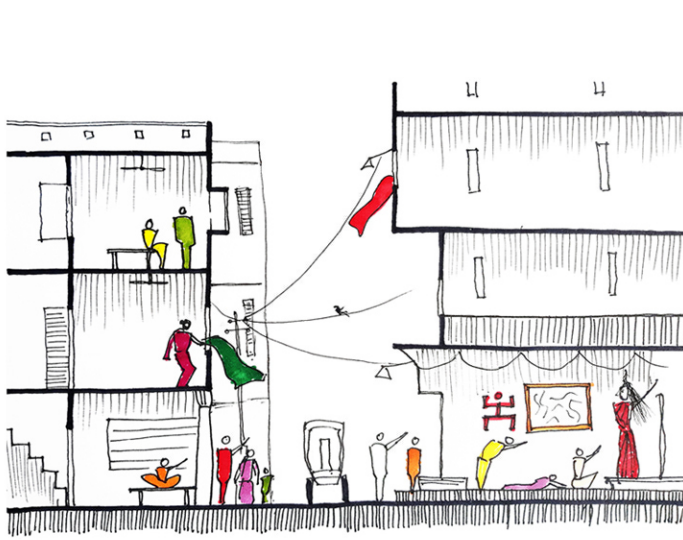
Evolution of Green Spaces over Time



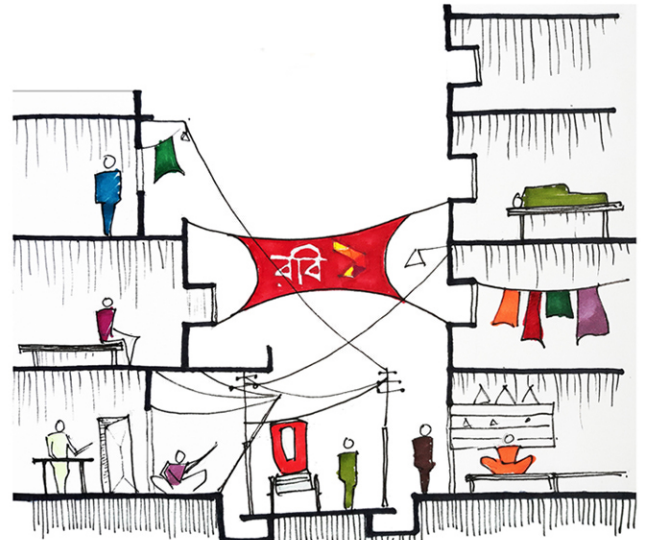
OPEN SPACE ■ Over time, the green space that existed in
 SHAKHA SHOPS ■ the rear part of the buildings got filled with
 RESIDENTIAL ■ built form to meet the rising housing
 OTHER SHOP ■ demand.



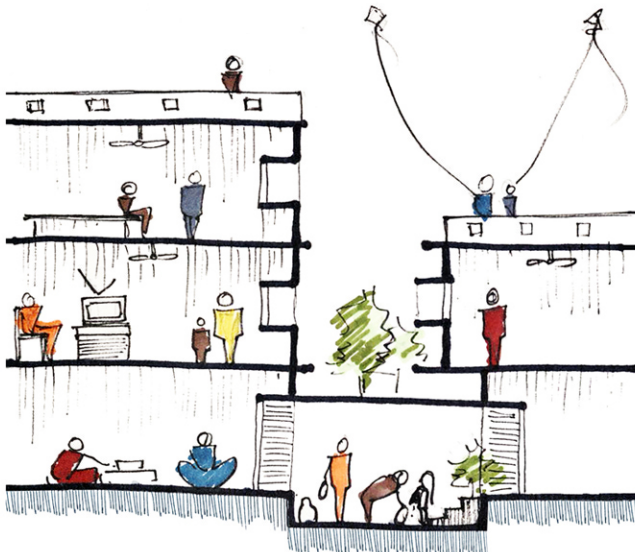
Social Dialogue among People, Building, and Street



Connection among temple, Residence, Shops and Road



Connection among Residence, Shops and Road



Connection Living Space and the Courtyard



Dialogue between Shopowners and Customers

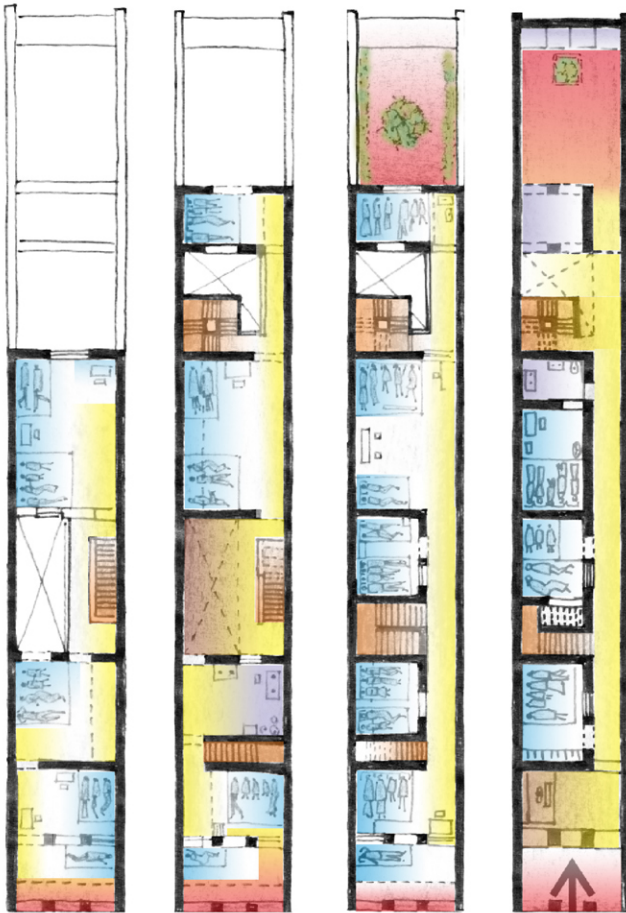


Rooftop Activities



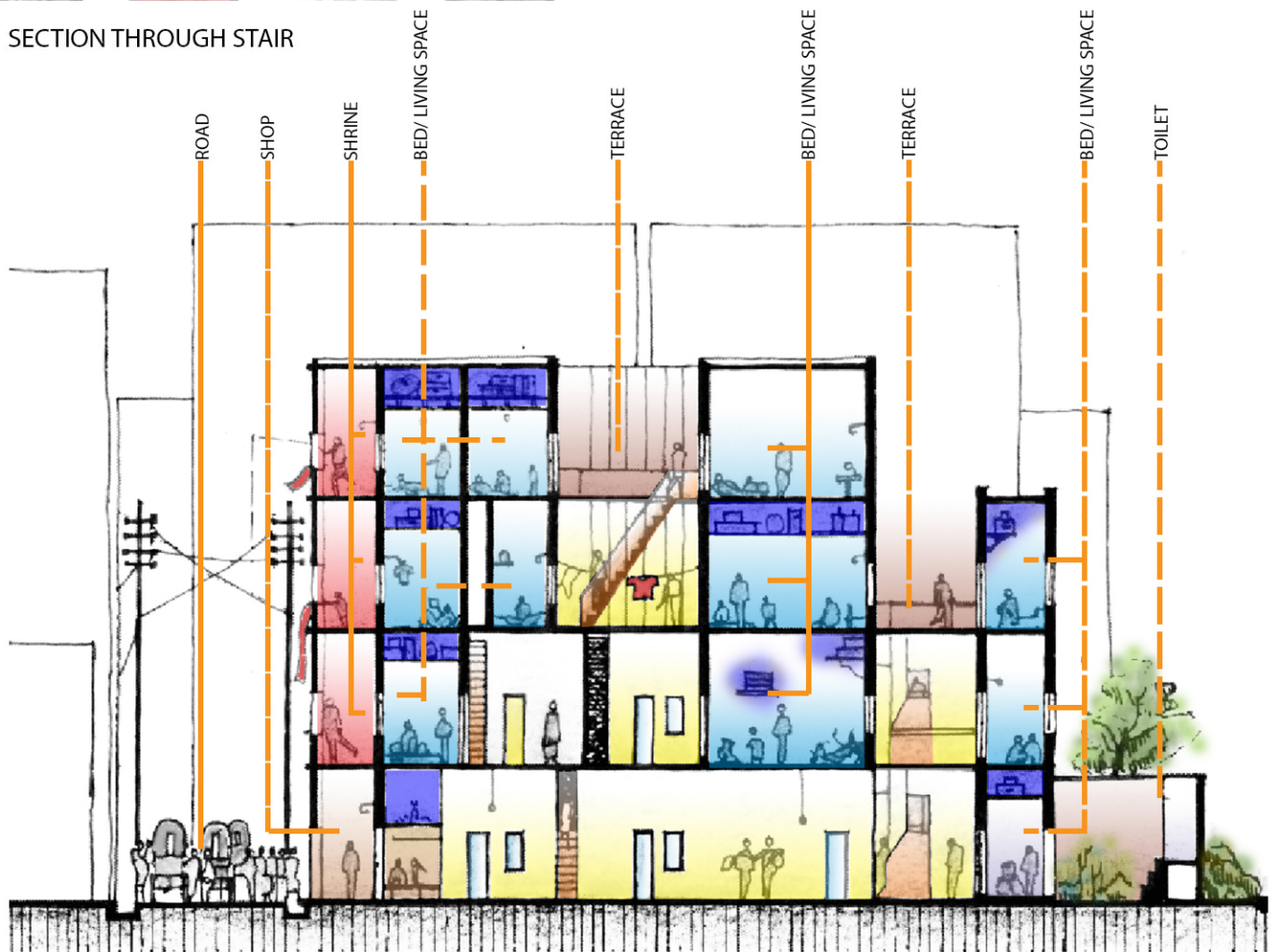
Dialogue between Street Vendors and Customers

Historic Building Study (Holding no. 32)



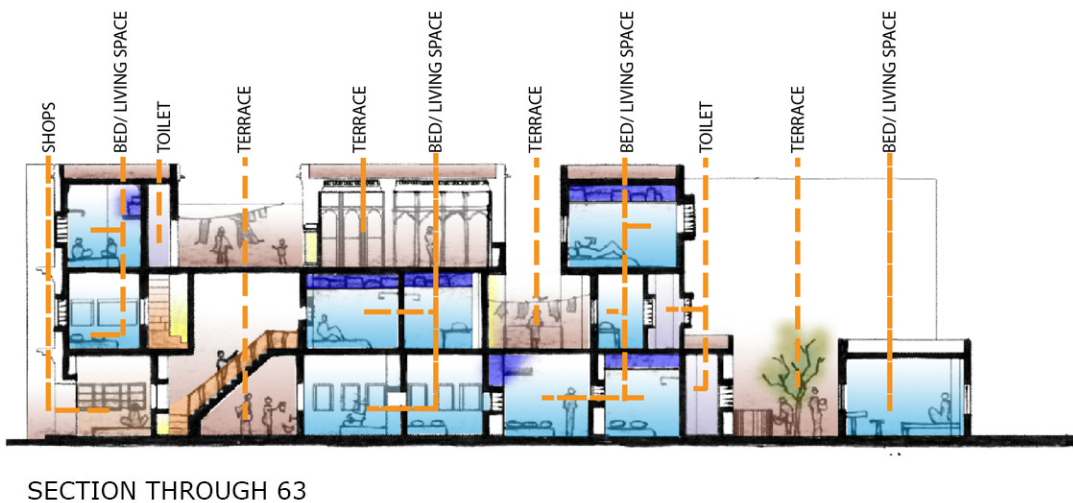
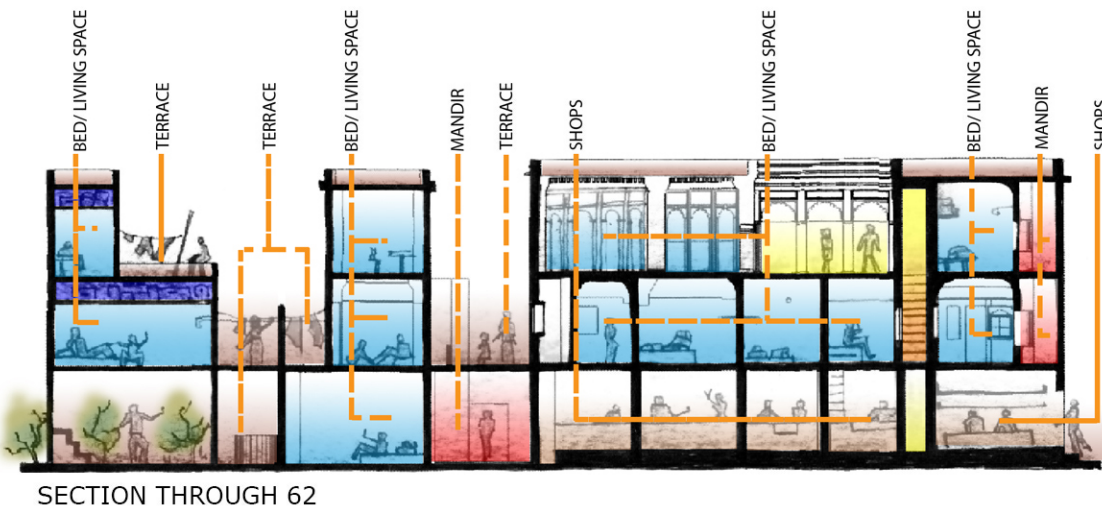
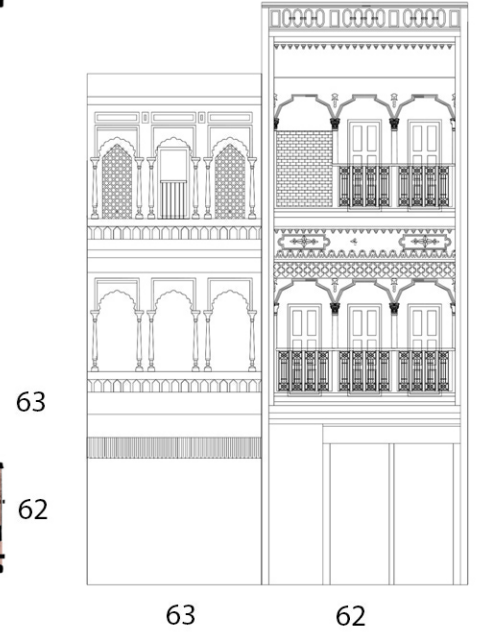
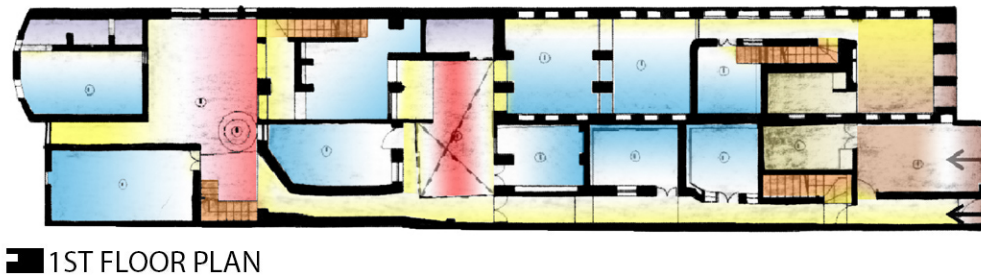
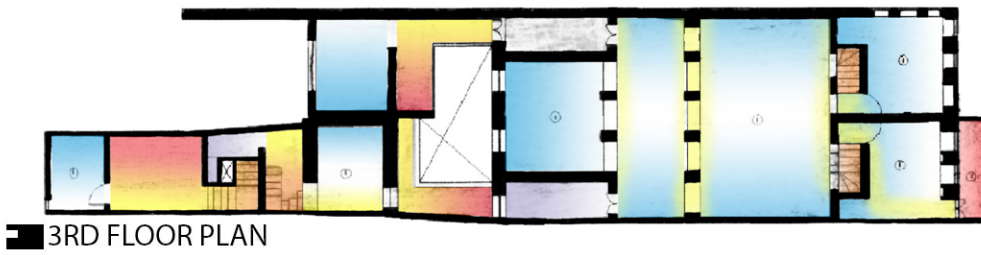
- BED/ LIVING SPACE ■
- SHOPS ■
- WORKSHOP/ STORE ■
- COMMON/ OPEN SPACE ■
- CORRIDOR ■
- VERTICAL CIRCULATION ■
- TOILET ■
- MANDIR/ SHRINE ■

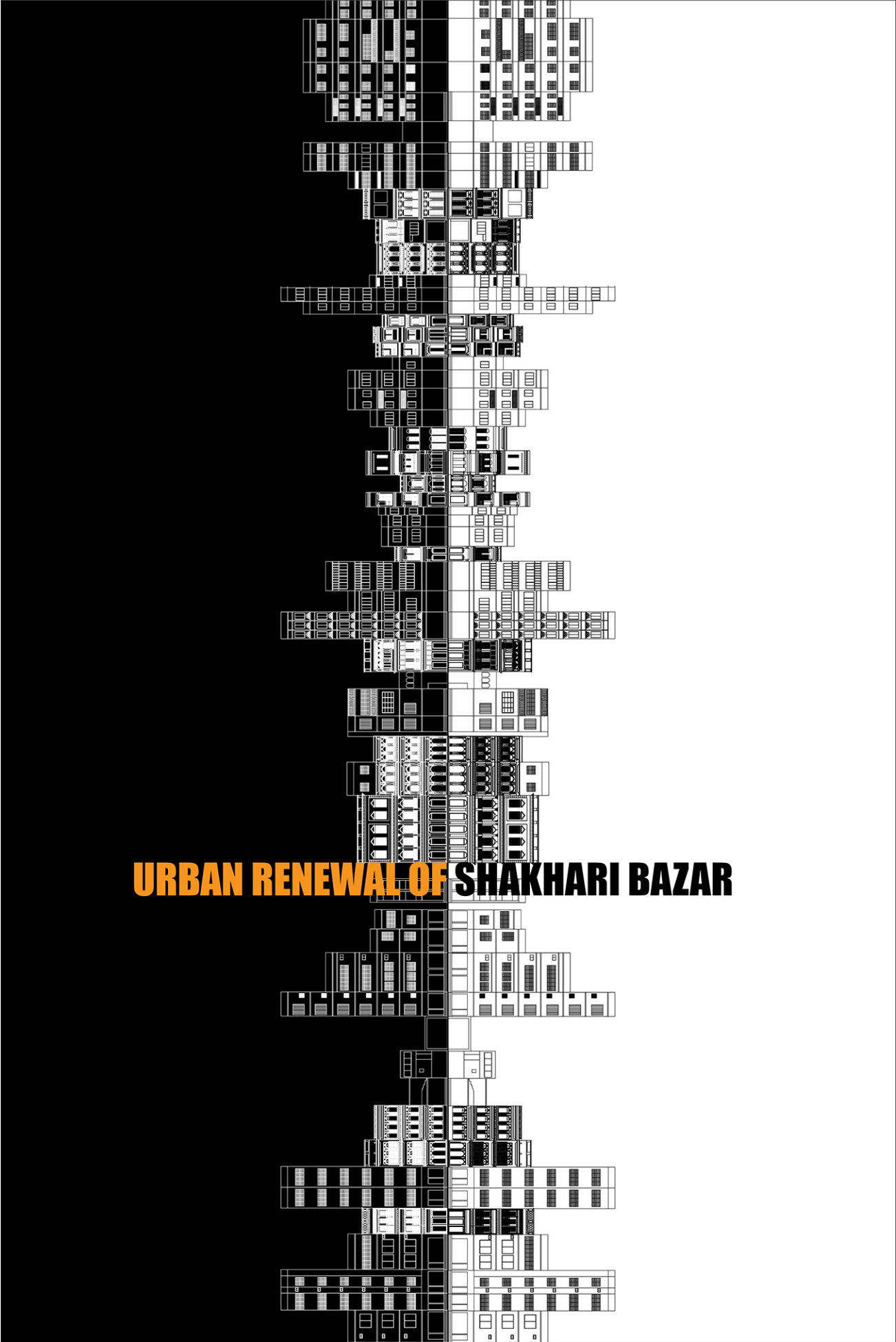
SECTION THROUGH STAIR



Historic Building Study (Holding no. 62 and 63)

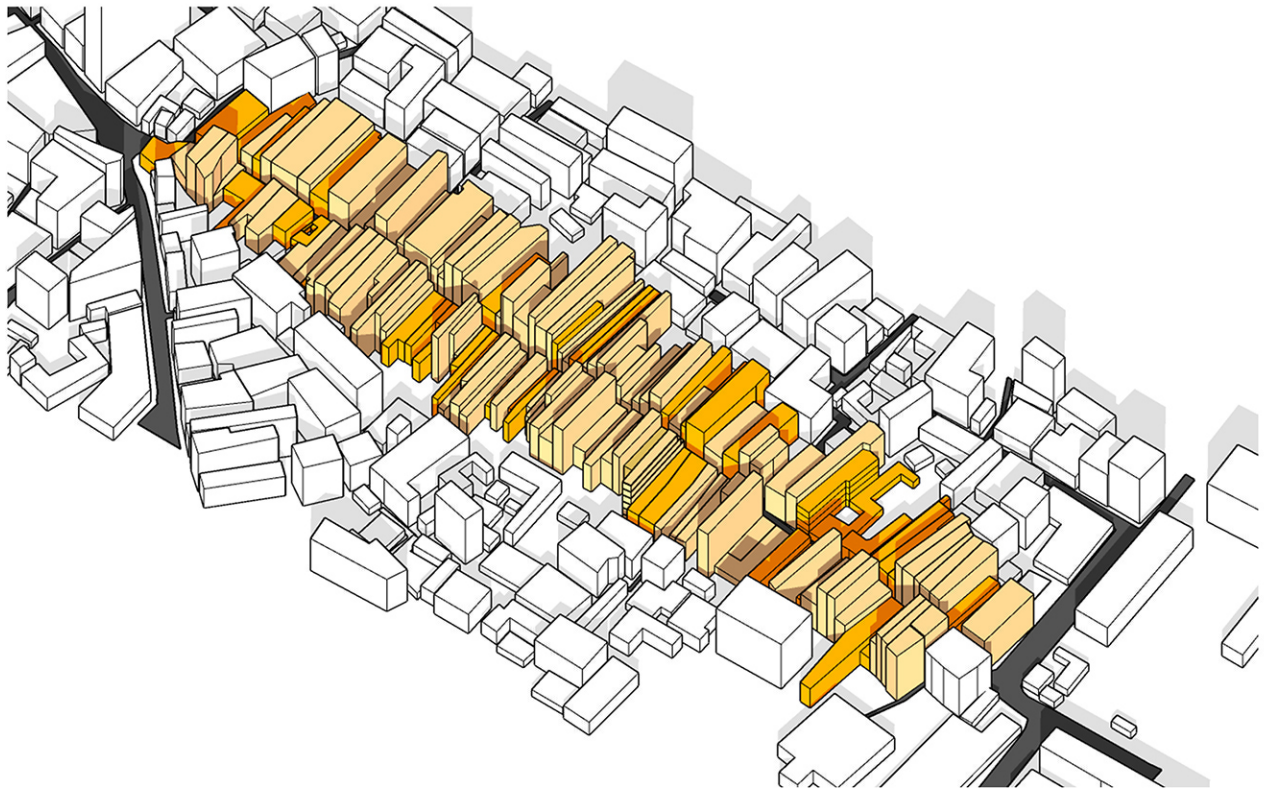
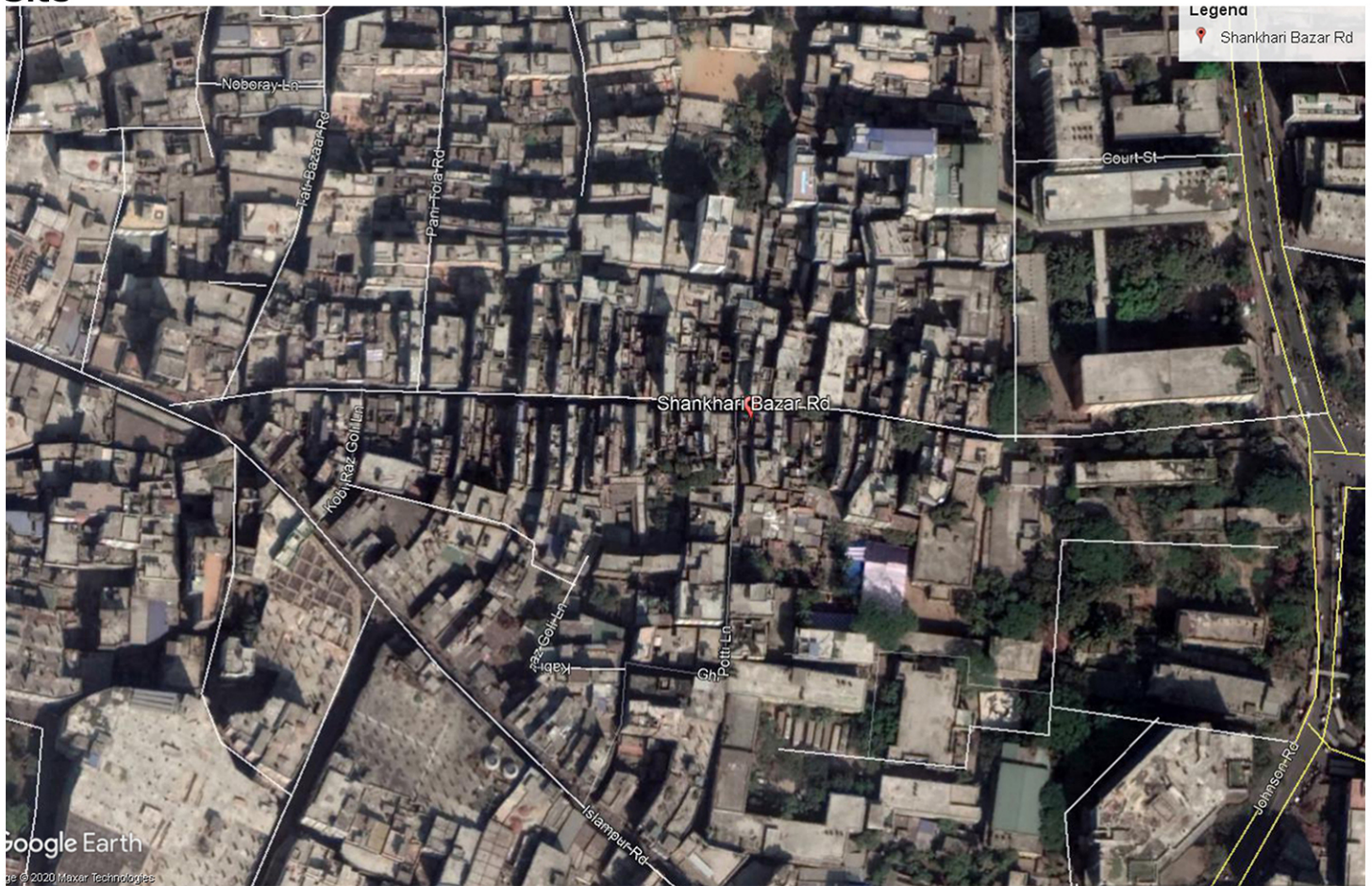
- BED/ LIVING SPACE ■
- SHOPS ■
- WORKSHOP/ STORE ■
- COMMON/ OPEN SPACE ■
- CORRIDOR ■
- VERTICAL CIRCULATION ■
- TOILET ■
- MANDIR/ SHRINE ■





URBAN RENEWAL OF SHAKHARI BAZAR

Site



Art and Crafts



Shakha craft is the most prominent and unique craft that is practiced along Shakhari Bazar. Apart from Shakha craft, other forms of crafts such as pottery and clay model making, kite, music instruments, sola (one type of foam) craft is also practiced along the site.

Jatin Lalit & Co. (Music instrument making shop) is the oldest music instrument making shop in Dhaka established in 1925.

Sola art has special importance in Hindu weddings. The sola crowns made for bride and groom are vital accessories in traditional Hindu Wedding.

Craftsmen take mentors to teach them about these crafts. The mentors mostly stay at the same house as the master and learn the craft for an extended period of time before they can start practicing individually.

Most of these crafts are deteriorating because fewer people are becoming interested in learning these crafts. As a result, a huge number of craftsmen have stopped practicing these crafts and converted their shops for other business purposes.

Conservation of these traditional crafts is vital to rejuvenate Shakhari Bazar.

Building Fabric



Building Fabric



Program

Craft School

- Shakha making studio
- Kite making studio
- Pottery Studio
- Sola art studio
- Music Instrument Making studio
- Cnc & laser printing workshop
- instructors room
- Lecture Room
- Meeting spaces
- Administration
- Projection Room
- Dormitory for students

Housing

Type 1

(plots without courtyard options)

- Shop front
- Workshop Space
- Family Housing
- Hostel

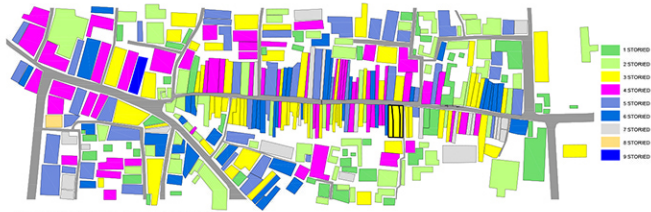
Type 2

(Amalgamated plots with courtyard option)

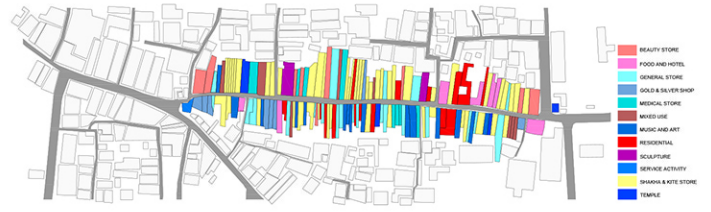
- Shop front
- Workshop/ Store
- Family housing
- Hostel

**Green Space for
Social Gathering
+
Connectivity**

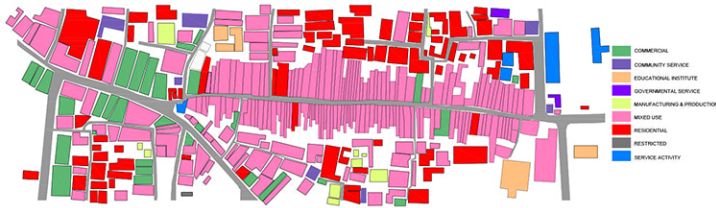
Site Data from GIS



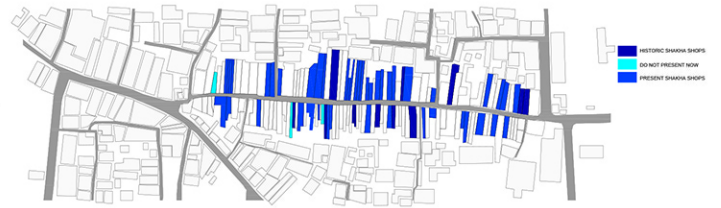
HEIGHT OF THE BUILDINGS



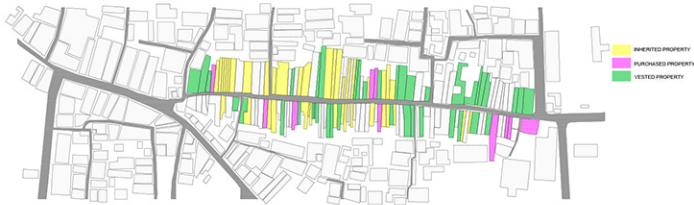
LANDUSE PATTERN OF THE SITE



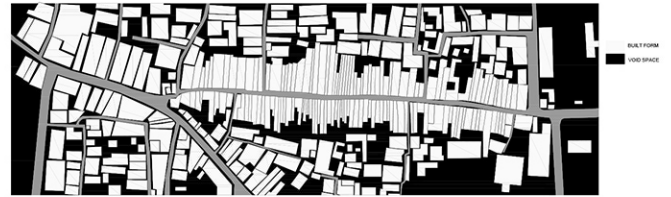
LANDUSE PATTERN OF THE ADJACENT AREA



Shakha Store Location



OWNERSHIP PATTERN

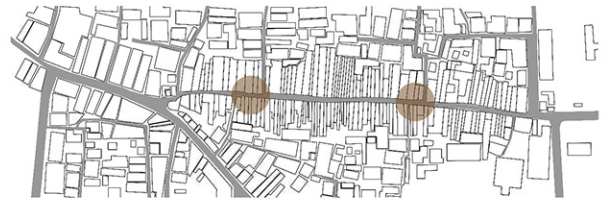


SOLID VS VOID SPACE

Site Selection for Craft School



Road layout



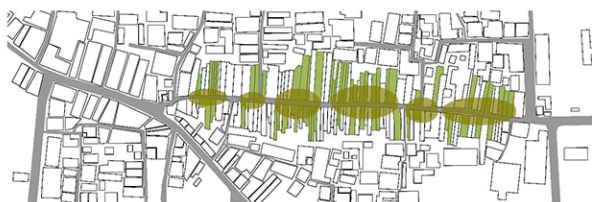
Node and Intersection



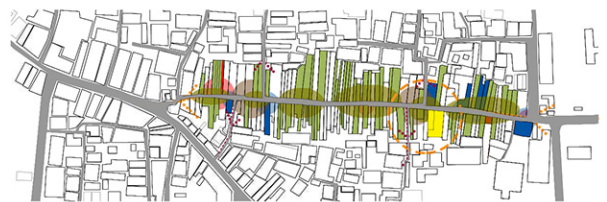
Religious Zone



Hospitality Zone

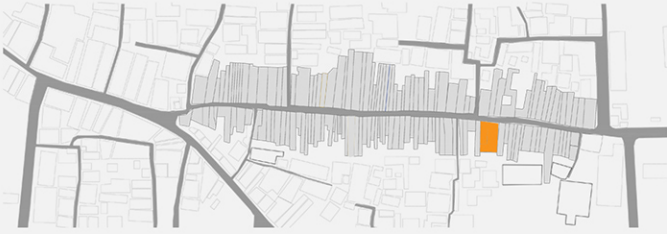


Shakha Stor Location

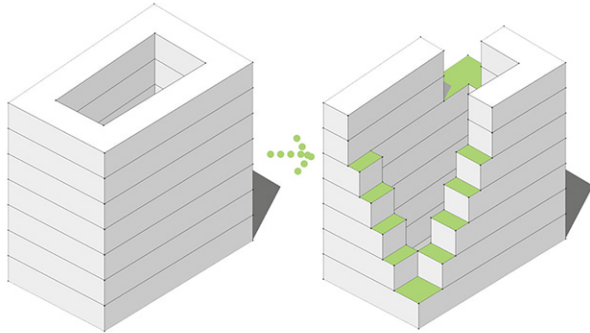


Craft School Site

Craft School Site Plan (Plot no. 125)



FORM TRANSITION

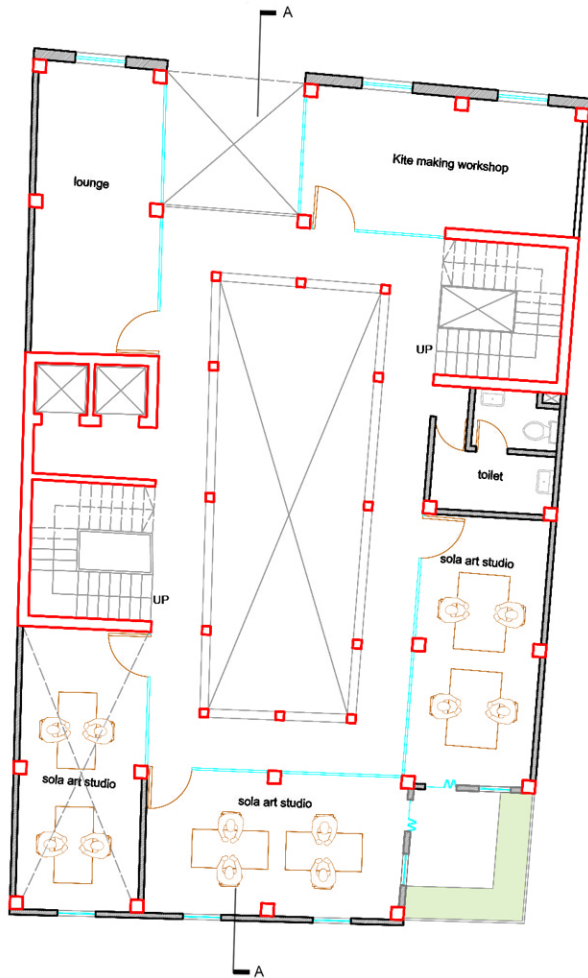


DAY LIGHT ANALYSIS



First floor plan

Craft School Floor Plans



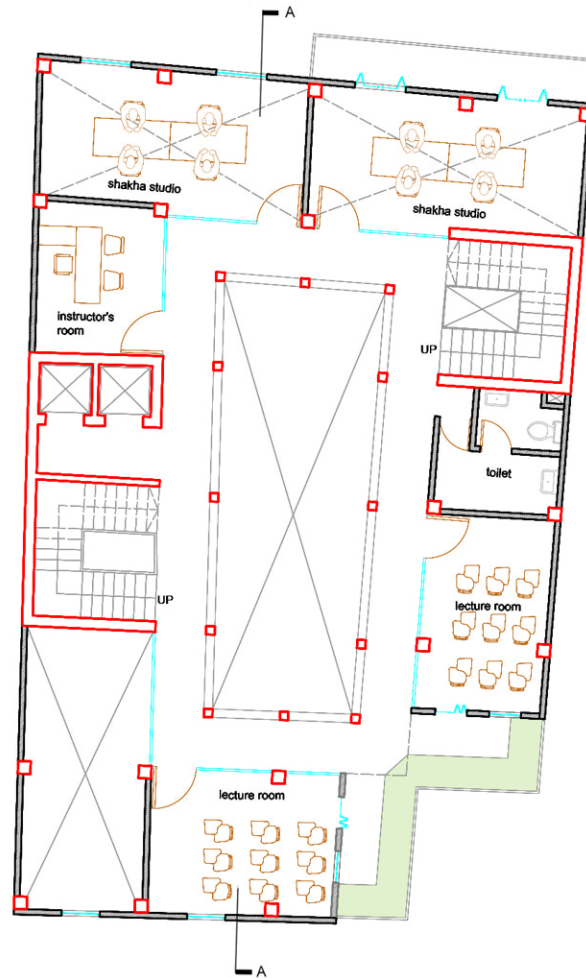
2ND FLOOR PLAN



Sola Art workshop for 12 persons area _ 237 sqft approx



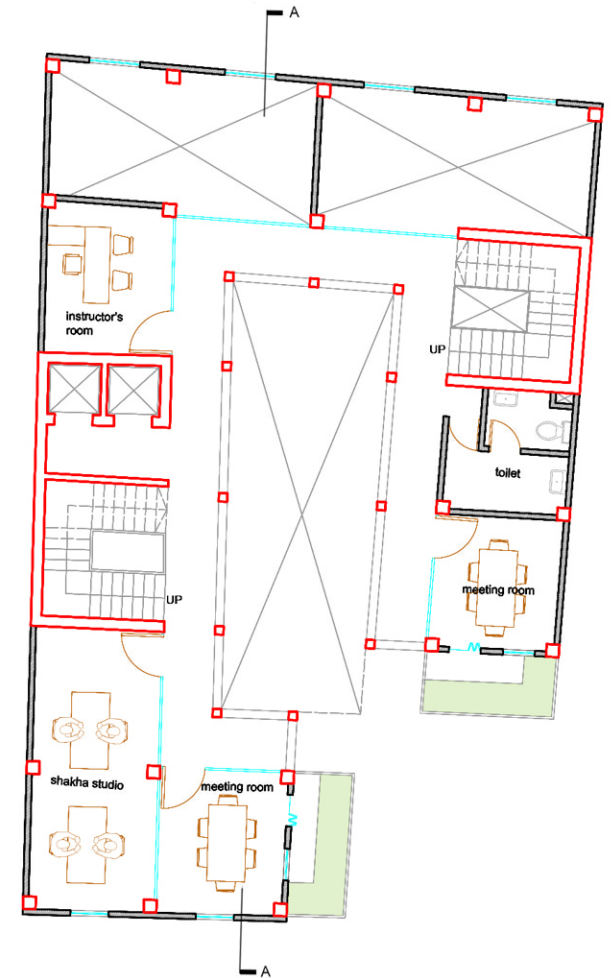
Kite making workshop area _ 255 sqft approx



3RD FLOOR PLAN



Shakha Studio for 8 persons area _ 255 sqft approx (each studio)

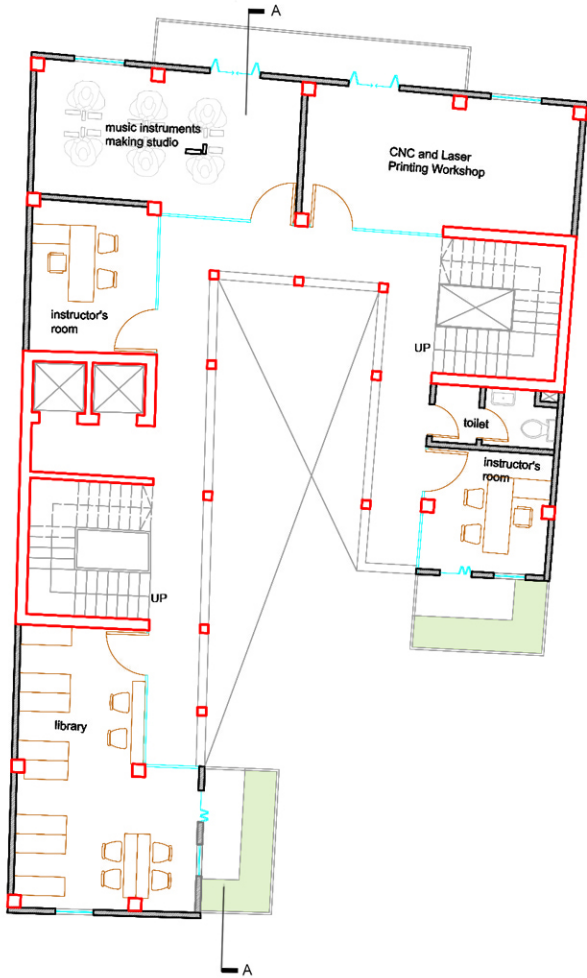


4TH FLOOR PLAN



Shakha Studio for 4 persons area _ 240 sqft approx

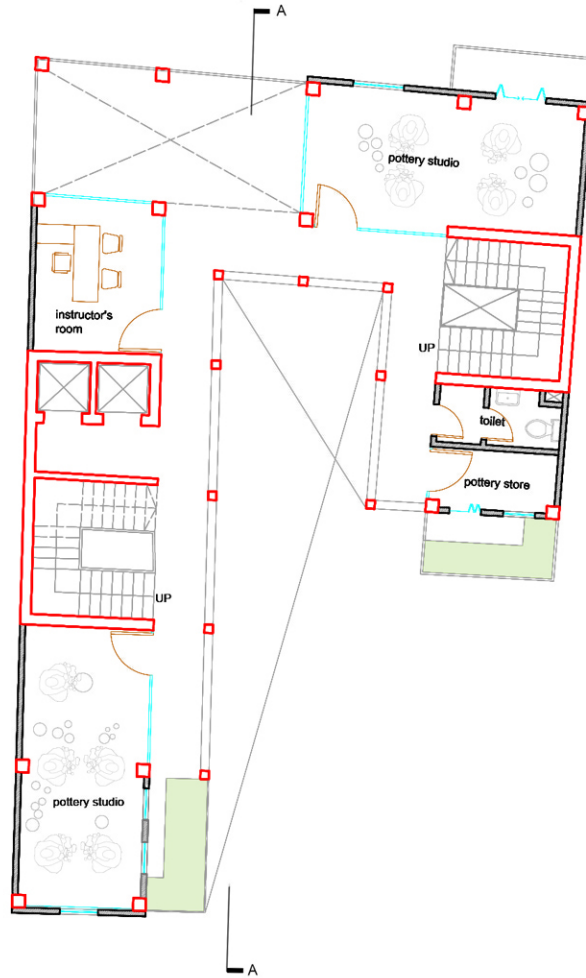
Craft School Floor Plans



6TH FLOOR PLAN



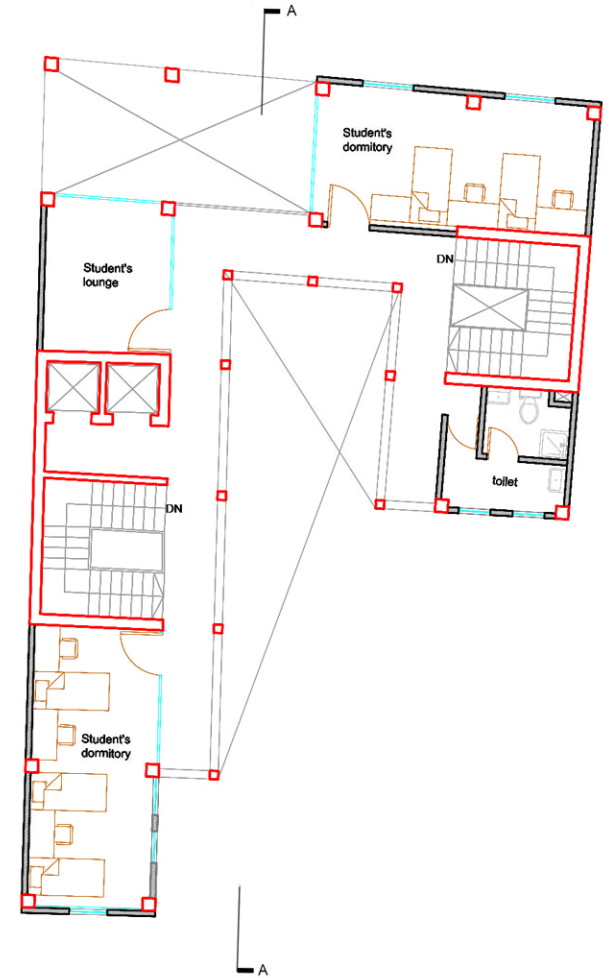
Music instrument making studio for 6 person
area _ 255 sqft approx



7TH FLOOR PLAN



Pottery Studio for 10 persons
area _ 237 - 255 sqft approx
(each workshop)



8TH FLOOR PLAN



North Elevation



South Elevation



Section AA

Visualization



Visualization



View from the Back



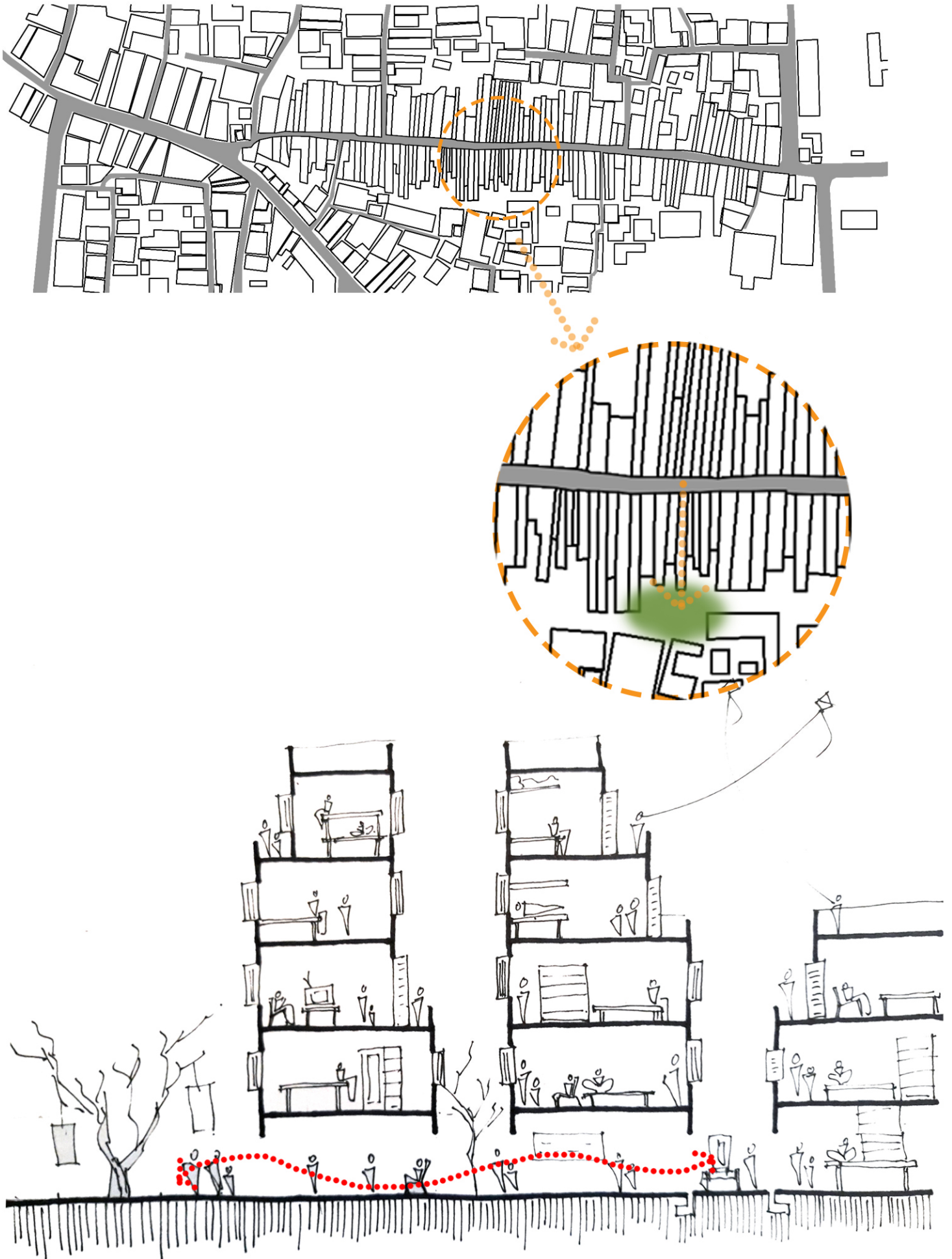
View from the balcony towards the courtyard

Visualization



Front View with Context

Concept Sketch for Housing and Connectivity to the Green Space

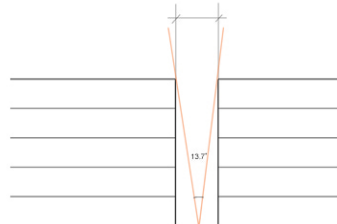


Housing_Option 1

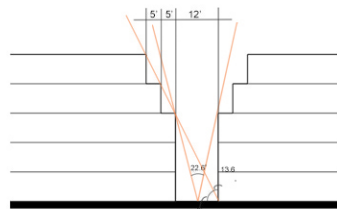
Existing road Frontage: 11'-3"
 Existing Building Height: 70' (approx)
 Proposed Building height: 50'

Linear plots without the provision of courtyard should hav provision for lightwell along the depth of the building for better light and air circulation.

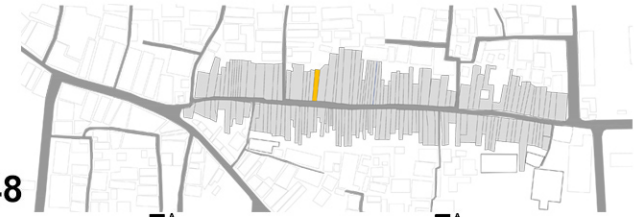
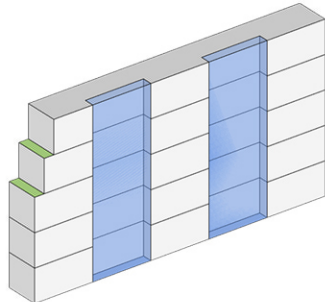
Each building will maintain 30' road frontage, after 30' each floor would offset 3'- 5' backwards to provide better lighting to the narrow alley.



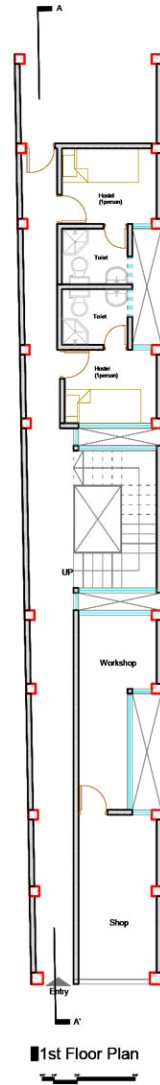
Vertical extension without setback



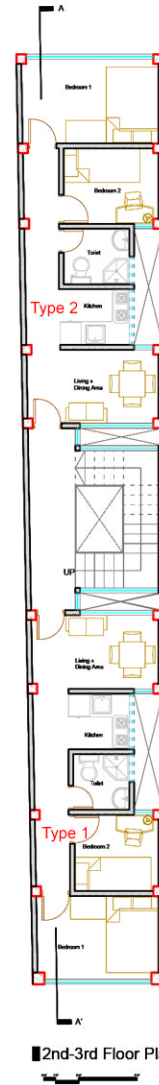
Vertical extension with setback (staggered massing)



PLOT NO: 48

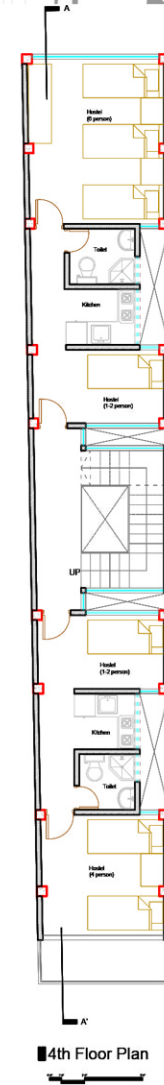


1st Floor Plan

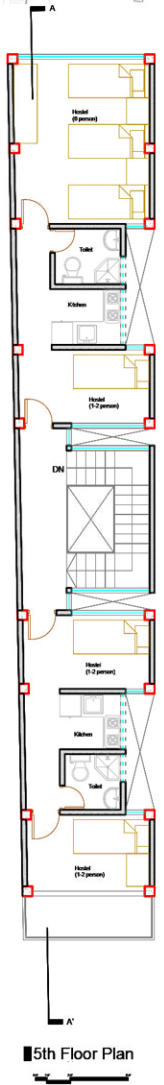


2nd-3rd Floor Plan

Type 1: 345 sqft
 Type 2: 373 sqft



4th Floor Plan



5th Floor Plan

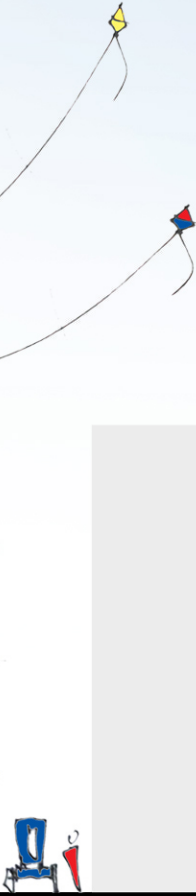
Housing_ Option 1



SOUTH ELEVATION
SCALE_ 3/32" = 1'-0"



SECTION AA
SCALE_ 3/32" = 1'-0"



Housing_ Option 2

Street frontage of plot 94: 6'-11"
 Street Frontage of Plot 95: 8'- 4"
 Combined Plot frontage: 15'5"

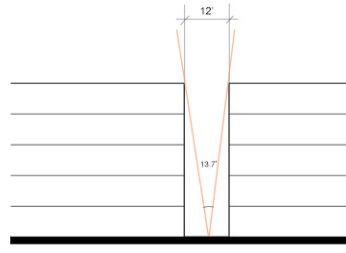
Plot having street frontage < 10' can merge with adjacent plot for better living space, circulation, light and air.

Newly merged plot street frontage should not exceed more than 20'

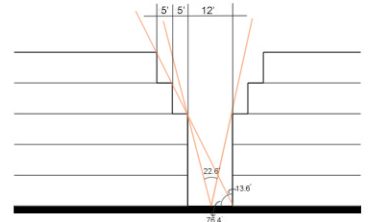
If 2 plots are merged, built form should not exceed more than 80%

20-25% plot area should be left as courtyard or light well for lighting and ventilation purpose. The courtyards can be used as social/gathering space for the inhabitants.

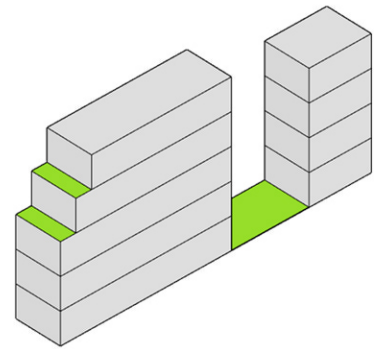
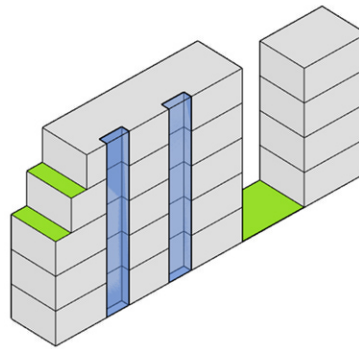
Each building will maintain 30' road frontage, after 30' each floor would offset 3'- 5' backwards to provide better lighting to the narrow alley.



Vertical extension without any setback



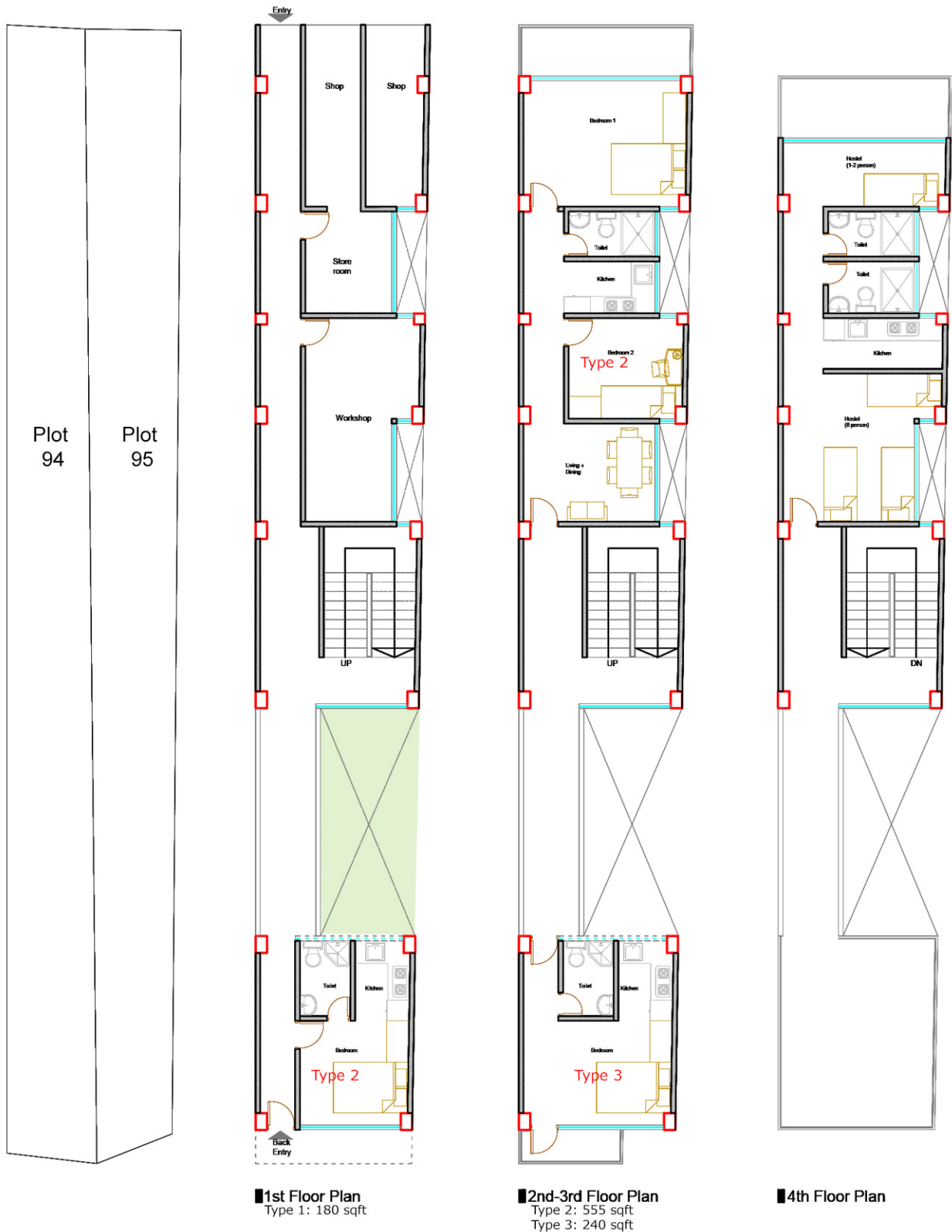
Vertical extension with setback (staggered massing)



Housing_ Option 2



PLOT NO. 94 - 95

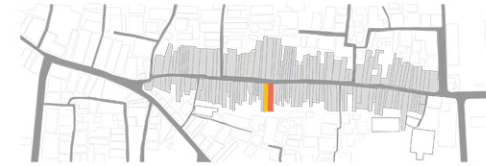


Housing_ Option 2 (Combined Courtyard)

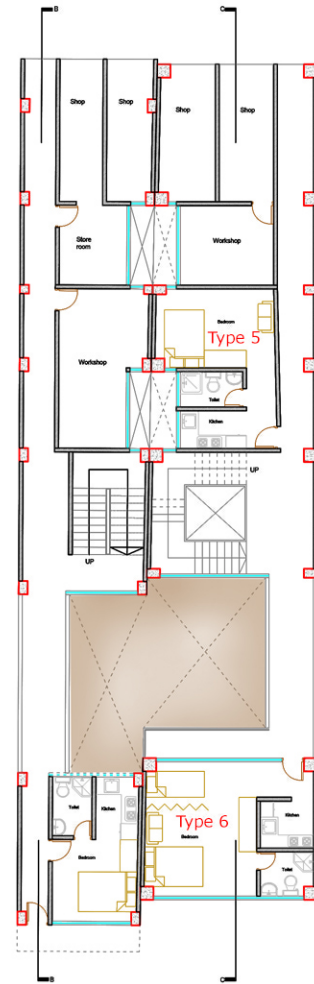
Combined street frontage of Plot 94-95: 15' - 5"
 Combined street frontage of Plot 96-97: 18' - 1"

Aligning of 2 adjacent lightwell and courtyard is advised for better light quality.

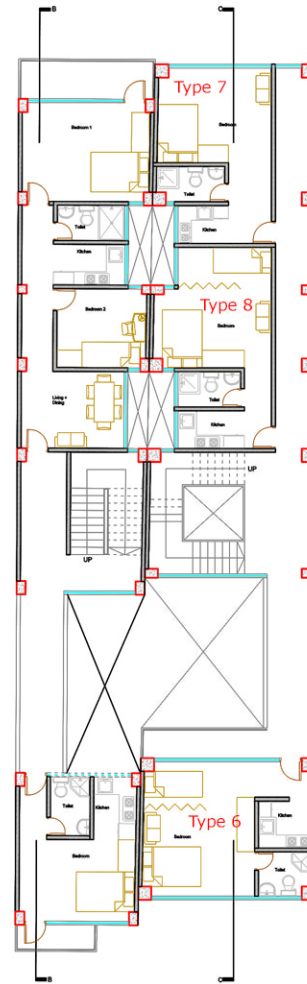
Combining adjacent courtyards can provide bigger social/ gathering space for the inhabitants.



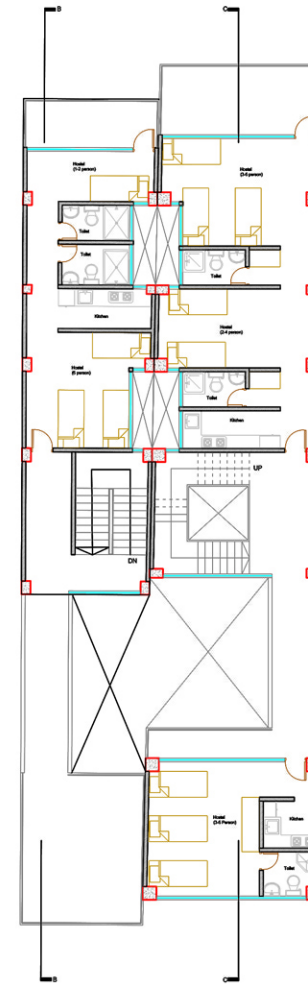
PLOT NO. 94 , 95, 96, 97



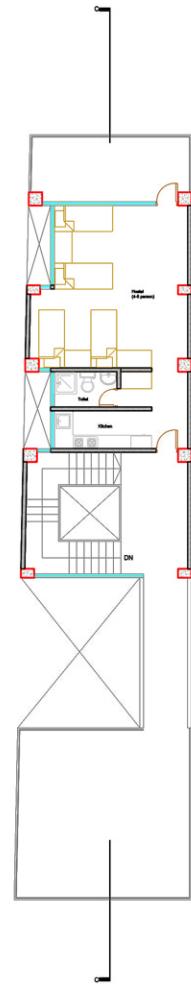
■ 1st Floor Plan
 Type 5: 250 sqft
 Type 6: 320 sqft



■ 2nd-3rd Floor Plan
 Type 7: 270 sqft
 Type 8: 295 sqft



■ 4th Floor Plan



■ 5th Floor Plan

Housing_ Option 2



North Elevation

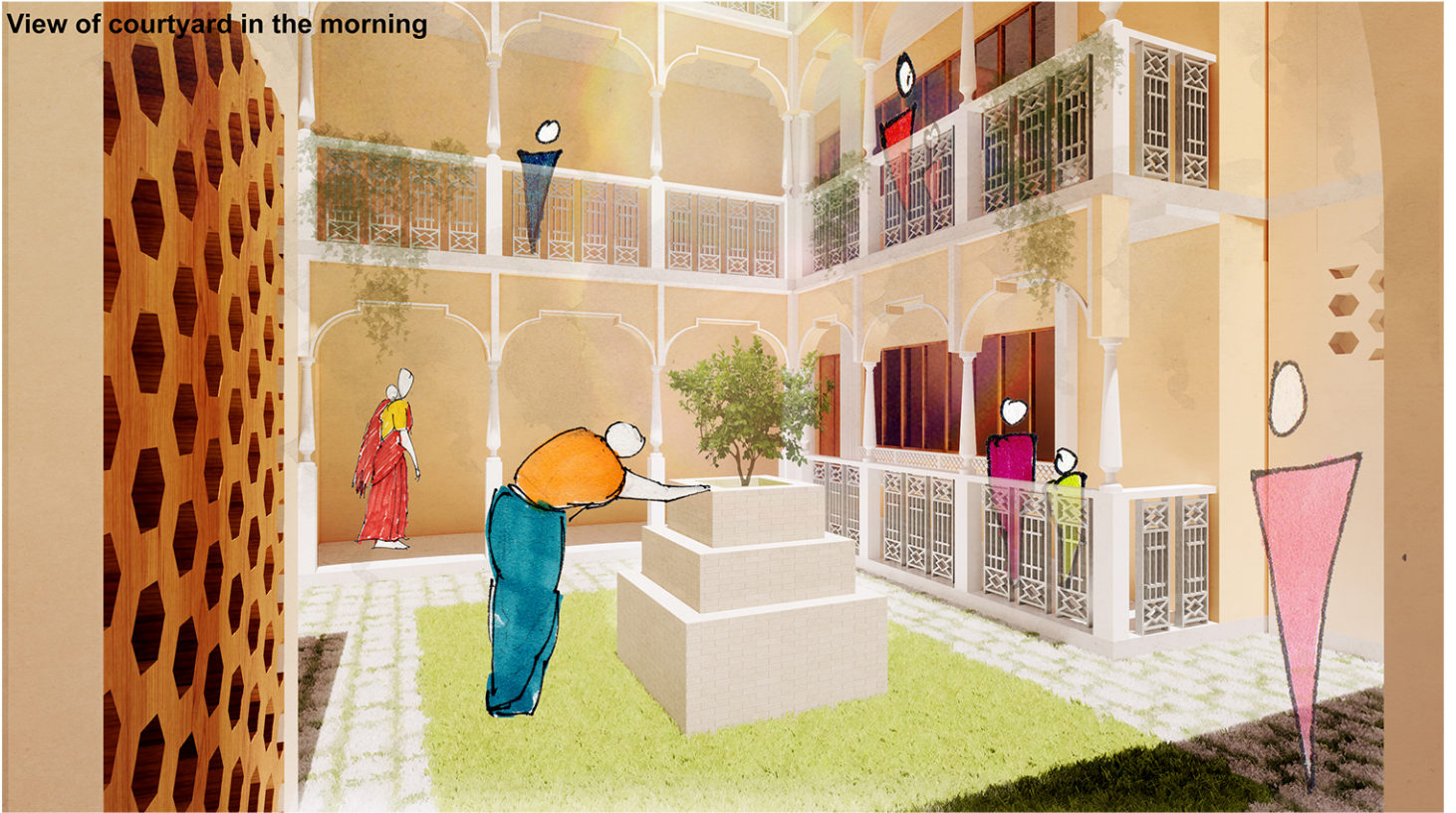
Section BB



Section AA

Visualization

View of courtyard in the morning



View of courtyard in the Evening





Visualization




Proposed Green Space



 Proposed Green Space with
 Pedestrian walkway network

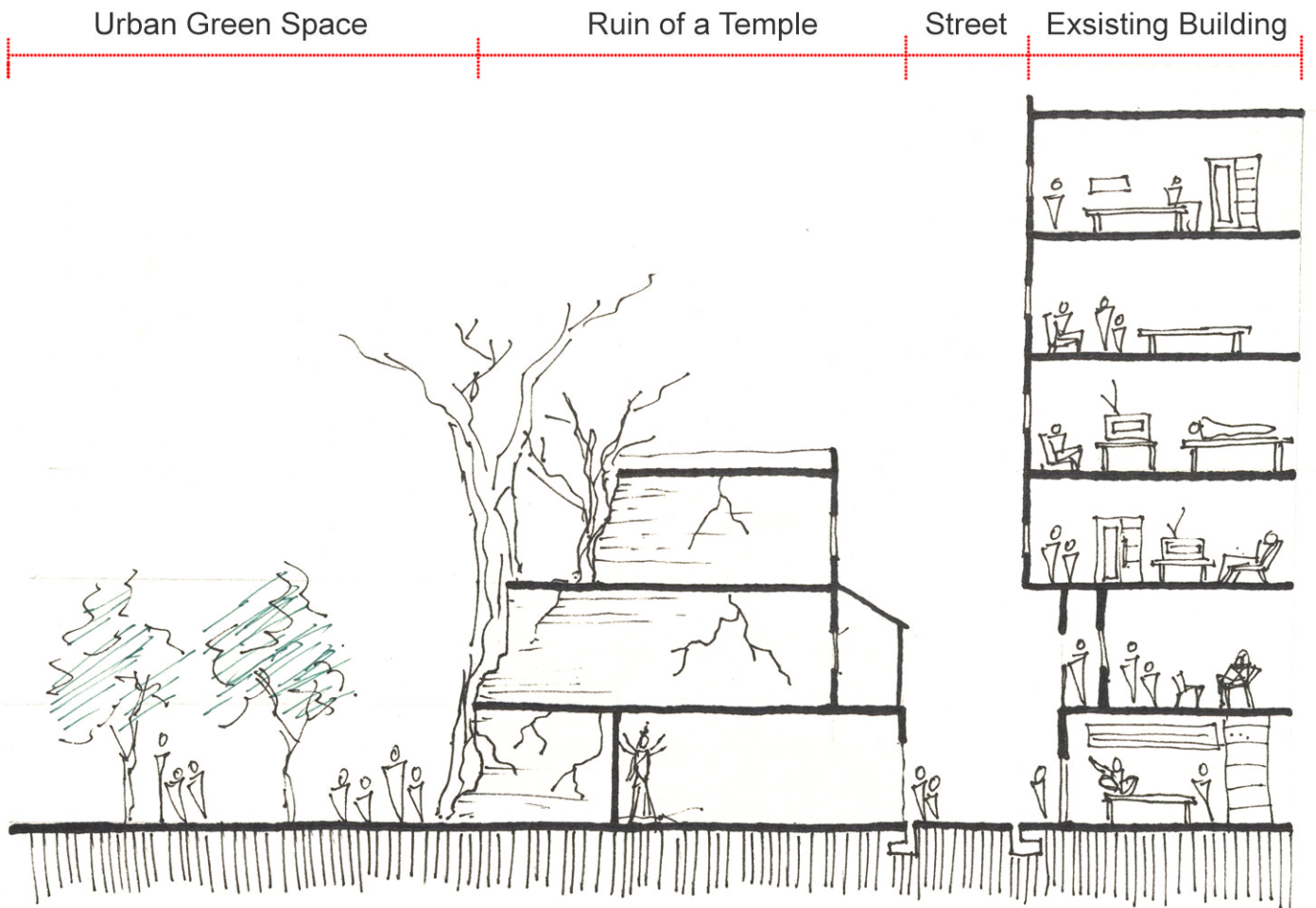
Proposed Green Space



 Proposed Green Space and courtyards with Pedestrian walkway network

Concept Sketch for Green Space and Soial Connectivity

Plot no_ 135 (Ruin of a Temple)



Visualization

Seating

Ruin of a temple (plot 135)



View from Courtyard to the Ruined Temple

Green spaces can be used for social gathering, for religious music concerts or as play ground for children.

Site Model Pictures

