

Students can kick the 'im' from the 'impossible'

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STUDENT projects are always exciting and invigorating. Impractical as they are supposed to be studio exercises invoke intelligent discussions and gives light to a new, fresh path. That in many ways is the way forward.

The students of 4th Year Architecture of The University of Asia Pacific, as evident in today's presentation, have undertaken a noble pursuit, as do students of most other universities, of trying to find a solution to the burgeoning problem of housing the poor in the urban scenario.

They collectively delve into three sites in Dhaka city with all their natural emotions, youthful exuberance and innocent expectations, and may even wonder at the end of their submission, 'so where is the problem!'

One wonders if the adults were left out of the decision making, if politics and self-interested quarters had not put their thick fingers in to every pie, perhaps, just perhaps, many of our troubles may have seemed very far away.

In their quest for respectability for the urban poor, they have imagined streets that 'are not just for pedestrian or vehicular use, but also preferred for social, economic, and domestic uses' but they had to succumb to the need for multi-storied housing, much above the street, if only to achieve an economically viable density structure.

They had the best of intentions when they convey the passion that 'community facilities have been given more

importance' and yet they cannot replicate the 'courtyard' above ground floor.

Will the word 'impossible' continue to haunt any of our pursuits to make the majority love better? Or does the future generation hold the answer? Perhaps with new materials, new technology, newer 'grounds' below earth, under water, up in the sky.

The students have shown that there is always room to improve, and that the age-old belief that open spaces are invaluable in creating a social order among dwellers in a community is true to the day. Oh! How we love to build, and build, and build! Are our residential areas even for the well-to-do any better or any more stimulating than container yards at our sea ports?

In today's instalment we also bring to you a short piece by our contributors on a praiseworthy effort by ARBAN (Association for the Realization of Basic Needs), an NGO working for the poor, which has undertaken a housing project for slum dwellers in Mirpur, Dhaka. Together they have kicked the 'im' from the 'impossible'.

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Low cost housing for the urban poor in Dhaka City: Studio design

Background: In March 2009, Centre for Urban Studies arranged a studio design workshop for low income group in Dhaka by the students of Department of Architecture, University of Asia Pacific (UAP), Bangladesh with support from URBIS Capacity Building Support for NDBUS (Nagar Dandira Basteebashir Unnayan Sangstha), a registered organisation with social welfare department, Dhaka representing urban poor and slum dwellers of Dhaka city.

About the Course: The workshop is an outcome of an eight-week long academic programme covered by the 4th year UAP architecture students as a design workshop. The students conducted physical and socio-economic surveys on three sites within DCC jurisdiction and prepared design proposals for site-specific upgrading and rehabilitation through affordable low-cost housing for the poor urban dwellers. Three types of projects were undertaken:

- Infrastructure upgrading at **Korail**, Mohakhali
- Land sharing through upgrading of existing settlements, at **Rayerbazar**
- Rehabilitation programme in a new location, at **Kalshi**, Section-12, Mirpur

Kalshi: The immediate past caretaker government pledged to provide land for rehabilitation of evicted slum dwellers during eviction drive in January 2007. A land area of 5 acres of National Housing Authority (NHA) was allotted at Kalshi, Mirpur for rehabilitation with responsibility of finance and execution by Coalition for the Urban Poor (CUP) and NHA. The land is currently a water body.

Design Proposal: KALSHI 1; Location: Bauniabandh, Block-C; Site Area: 9.1 acres

Existing Site Condition: Access roads are prominent on all sides. A highway route construction is on-going beside the site and a lake on the opposite side of the site. There are three types of land ownership in the settlement area identified as card holder, illegal user, and rental user. There is hardly any open space in the site, as

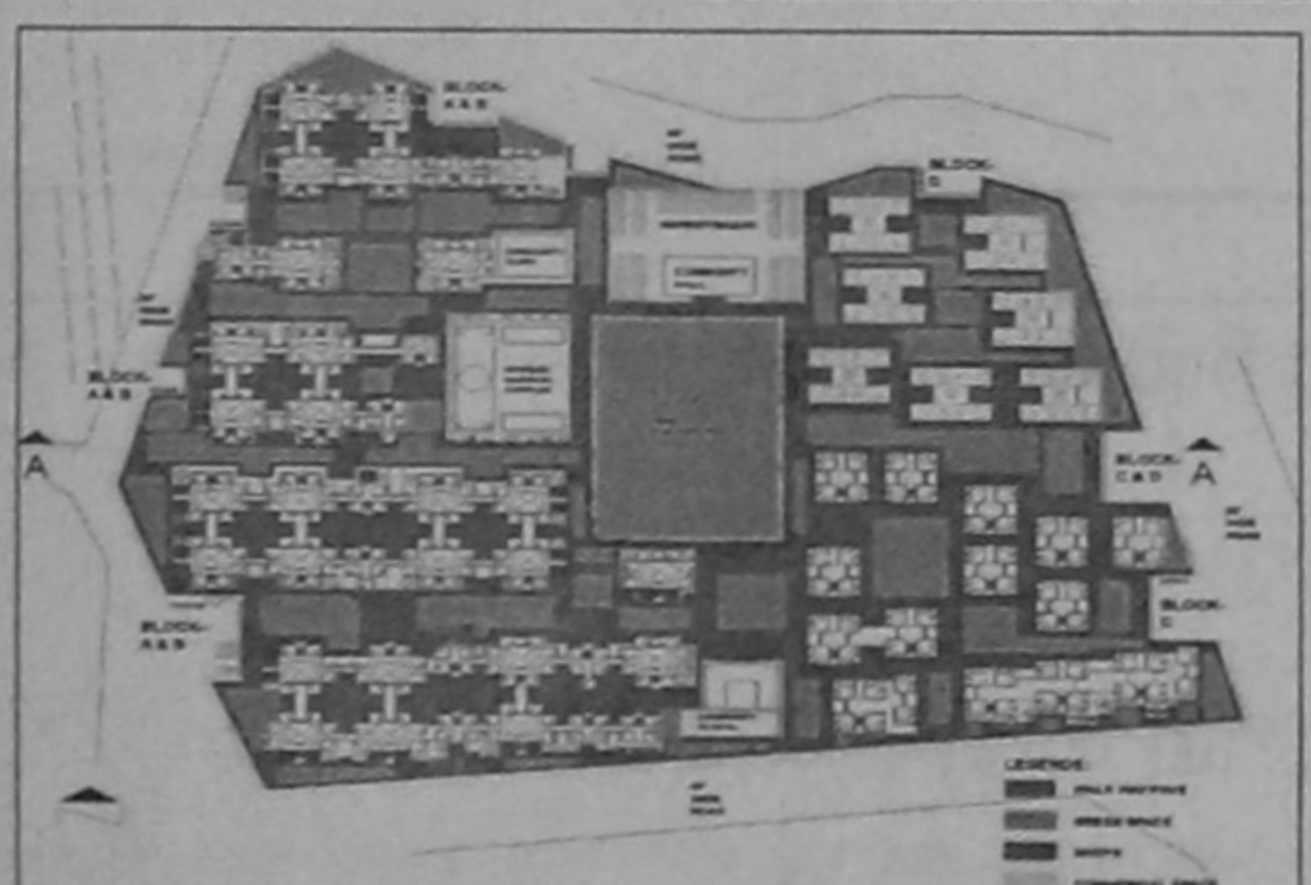
health centres, community centres, masjids etc.

Design Consideration

- Common indoor space for work & socialising to



Income group (Tk./Month)	Unit Type	Total Unit Area (sq.ft.)	Cost Return (in Tk. & Years)		
			Per Unit Cost	Rent/ Month	Return by
3,000 - 8,000 (LIG)	A	220	2,20,000	1,222	15
3,000 - 8,000 (LIG)	B	209	2,09,000	1,161	15
8,000 - 12,000 (LIG)	C	334	3,34,000	1,855	15
12,000 & Over (MIG)	D	493	4,93,000	2,738	15



Proposed Housing at Kalshi 1

existing housing structures are very compact.

Design Concept: Design decision has considered the lifestyle of the low income group to create a habitable & healthy housing settlement. For this, design concept consists of sharing space for living and working. Central community space will be provided which includes educational institutions,

- enhance security
- Inter-connected buildings for social bonding
- Internal courts to allow women to work in leisure and to serve as children's play zone

Housing Unit: Housing unit is proposed considering income level of the inhabitants of the area. **Proposed Land use:** The total land area is distributed in the ratio:

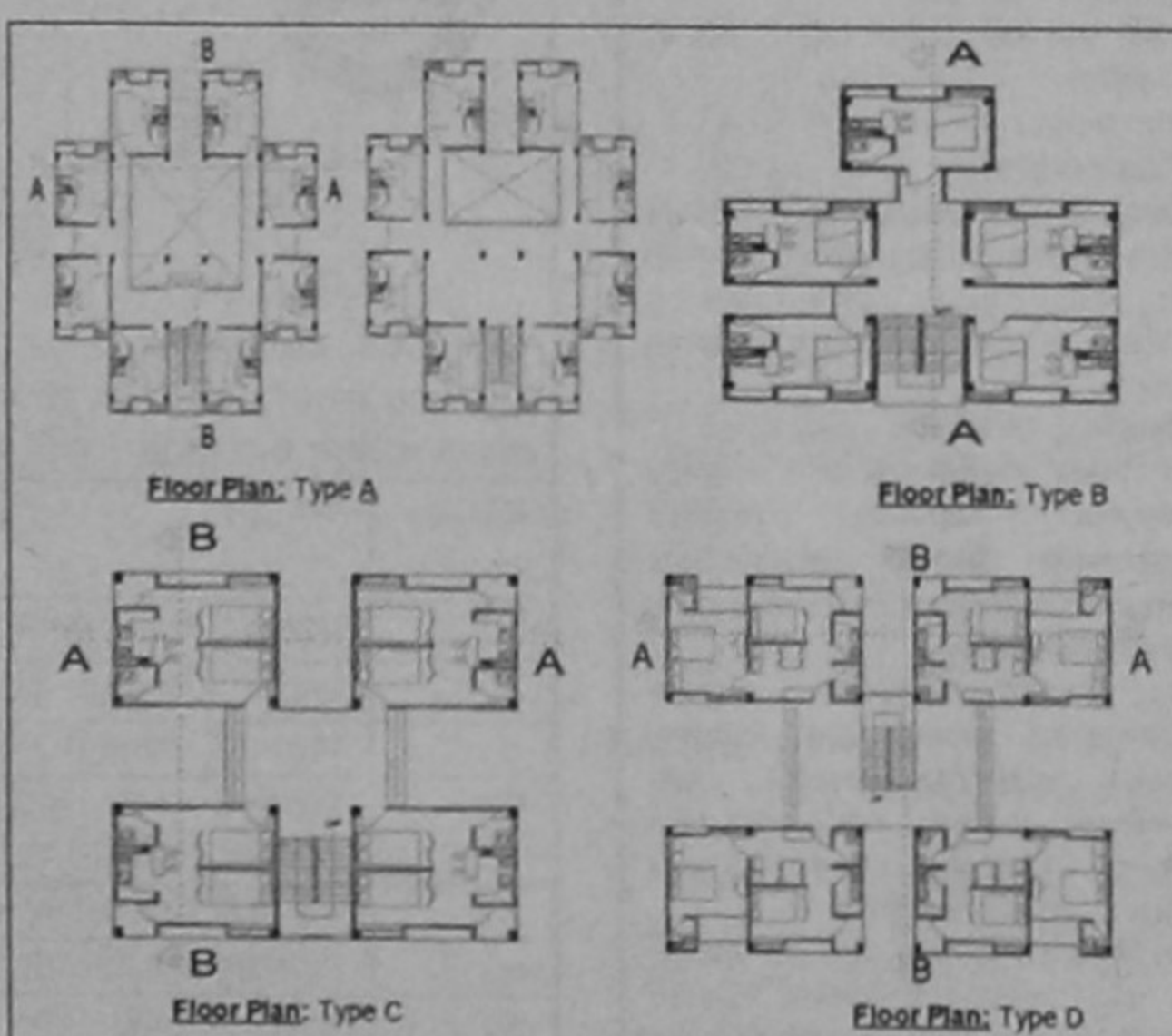
Housing Block +Community Space 33.58%, Road 30.42% and Green Space 36%. **Density:** 245 household/acre. **Note:** Unit features are given below:

Type A: Bedroom, Kitchen with Dining Space, Toilet

Type B: Bedroom, Kitchen with Dining Space, Toilet

Type C: 2 Bedrooms, Kitchen with Dining Space, Toilet, Balcony

Type D: 2 Bedrooms, Kitchen with Dining Space, Toilet, Balconies



Rayerbazar: Rayer bazar (Ward-47) is located in the south east part of Dhaka city closed to Dhanmondi. Population estimates of 2005 of the Ward 47 were 87387 with a slum population of 60911 (69.70%). The area selected for the design project, Aziz Khan Baste, was part of a wetland before construction of the flood protection embankment (Beribadh) in 1995.

Design Proposal: RAYER BAZAR; Location: Sadek Khan Road; Site Area: 7 acres

Existing Site Condition: The slum is located in the periphery towards the Rayer Bazaar embankment. In the proposed project area three types of building structures are found. These are: (a) Jhupri -- structures made of temporary materials such as jute stalk, sack, leaves of trees etc. (80%), (b) Semi-pucca (15%) & (c) Pucca (5%). There is hardly any space for recreation facilities.

Design Concept: Streets are not just for pedestrian or vehicular use, but also preferred for social, economic, and domestic uses. They usually conduct all activities along the major streets. The design therefore provides them with a street of their own, where they can do their domestic, economic, and social activities.

Design Consideration

- Pedestrian pathways



- Common ground to meet harmoniously
- Space for agricultural activities (introduction of the term Urban Agriculture)

Income group (Tk./month)	Unit Type	Unit Area (sq.ft.)	Per Unit Cost (in Tk.)	Cost Return (in Tk. & Years)		
				Rent/ Month	Return by (in Yrs.)	Return by (Yrs.)
12,000 - 15,000 (MIG)	A	1050	10,50,000	3,997	22	22
8,000 - 12,000 (LIG)	B	16	6,16,000	2,567	20	20
5,000 - 8,000 (LIG)	C	109	5,09,000	2,357	18	18
1,000 - 5,000 (LIG)	D	407	4,07,000	1,885	16	16
1,000 - 5,000 (LIG)	E	342	3,42,000	1,563	16	16

Housing Unit: Considering the socio-economic condition of the residents of the area 5 types of housing units have been proposed:

Proposed Land use: The total

Korail: Having the largest slum and squatter settlements (with 1,20,000 population) of Dhaka, residing mainly on 40 acres of land owned by Ministry of Science and Technology. Rest of the land areas are owned by Bangladesh Telecommunications Company Limited (BTCL) and PWD in another 50 acres. A proposal by the Public Works Department (PWD) to build 4,256 flats in Korail site was approved by ECNEC on 24 November 2008. Urban activists and researchers are hopeful that the government will develop these prime government lands in conformation with the Dhaka Master Plan and also provide proper rehabilitation of existing slum and squatter settlements.

Design Proposal: KORAIL; Location: BTCL; Site Area: 25 acres

Existing Site Condition: In the proposed project area three types of building structures are found. They are (a) Kutcha (80%) (b) Semi-pucca (15%) & (c) Pucca (5%). Overall three sizes of housing units exist by area; 1000-1100 sq.ft, 750-800 sq.ft, and 550-600 sq.ft. The Banani Lake is located east of the site. The site has access roads from all sides. A main road connects the site with the city. The kutcha and semi-pucca houses are slum and squatter settlements.

Design Concept: The main concept in planning of the rehabilitation and upgrading of slum at Korail is to provide each of the different groups their own privacy and security by giving them defined living areas but connecting them through common services and facilities (masjid, park, market etc.) used by all groups within the designed area.

Design Consideration

- Overall improvement of existing unplanned housing environment
- Enhancement of lake-side environment
- Developing internal open spaces between buildings to improve relation among dwellers
- Placing public utility build-

ings to act as a landmarks and create sense of direction as well as serve to identify different zones

Housing Unit: Considering socio-economic condition of the inhabitants of this area, four types of housing units may be considered as an improvement to the existing housing problems. This is described in the following table: (LIG - Low Income Group; MIG - Middle Income Group; HIG - High Income Group)

Cost Return: For Low Income Group Hire Purchase System is proposed.

Note: The affordability is shown for the low income group only.

Proposed Land use: The total land area is fairly distributed in the ratio: Built Space 32%, Road 21.80% and Green Space 46.20%.

Density: 75 household/ acre

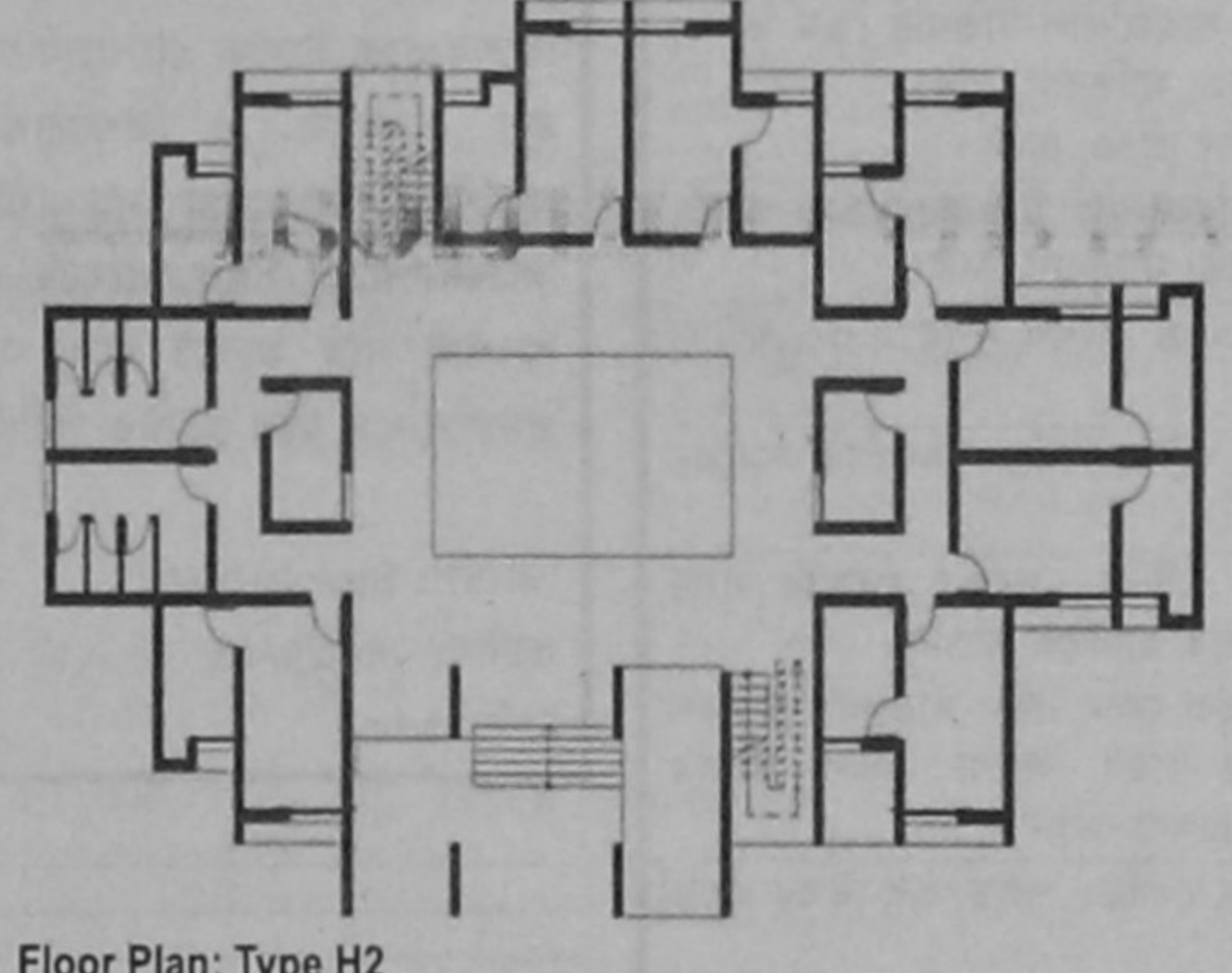
Unit Type (with area)		Unit Features	Unit Cost (in Tk.)
E (MIG)	Type 1: 1000 sq.ft.	3 Bedrooms, Dining Space, 3 Toilets, Kitchen	1,600,000
	Type 2: 1100 sq.ft.		
F (MIG)	Type 1: 850 sq.ft.	2 Bedrooms, Dining Space + Living Room, 2 Toilets, Kitchen	8,80,247
	Type 2: 800 sq.ft.		
G (MIG)	Type 1: 650 sq.ft.	Bedroom, Dining Space + Living Room, Toilet, Kitchen	7,12,989
	Type 2: 700 sq.ft.		
H (LIG)	Type 1: 360 sq.ft. (H1)	Bedroom, Common Room, Toilet, Kitchen	4,25,993
	Type 2: 280 sq.ft. (H2)	Bedroom, Common Room, Shared Toilet, 2 Shared Kitchens	3,97,644
	Type 3: 360 sq.ft. (H3)		4,10,777



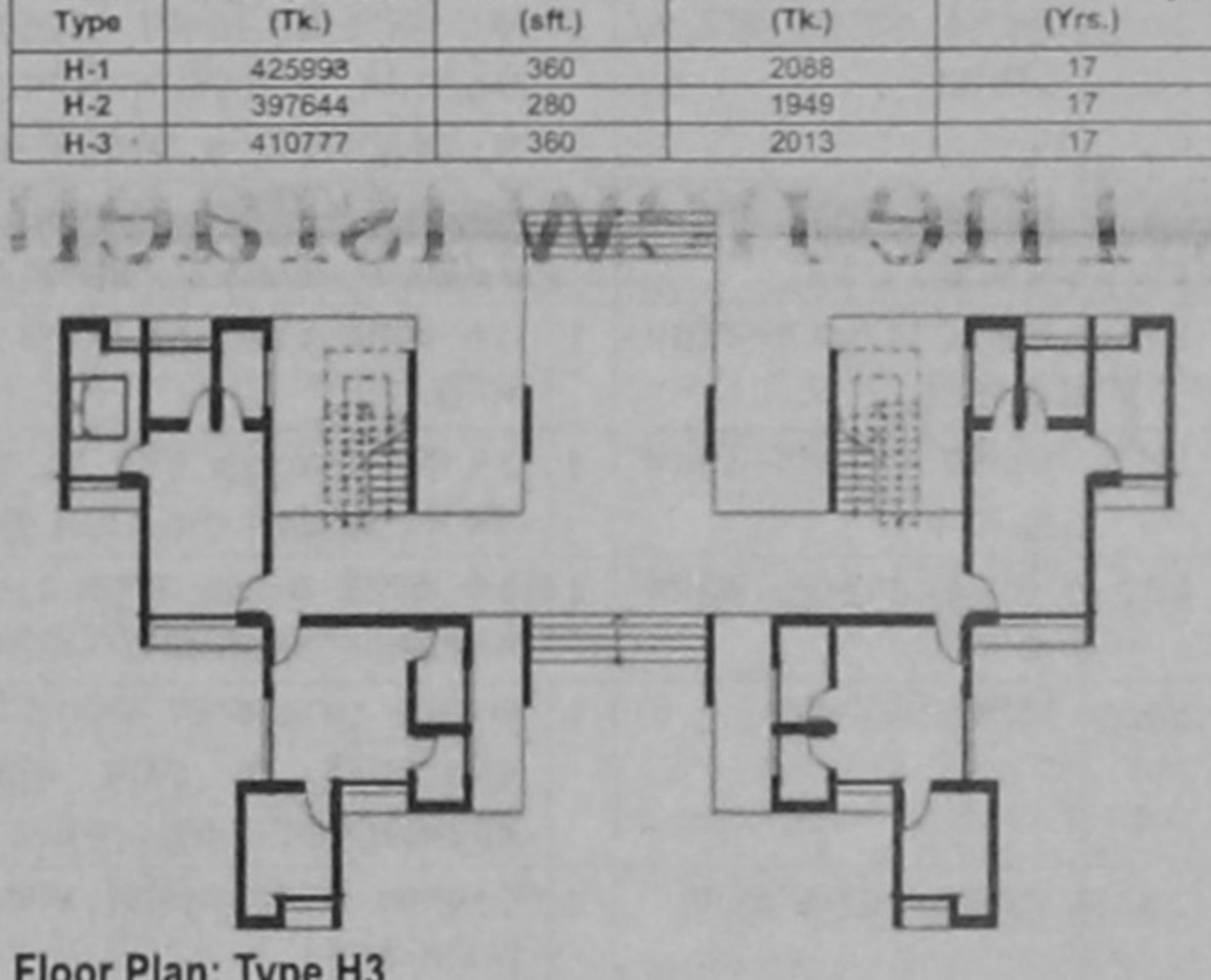
Proposed Housing at Korail

Cost Return: For Low Income Group Hire Purchase System is proposed.

Unit Type	Per Unit Cost (Tk.)	Unit Area (sq.ft.)	Rent/ Month (Tk.)	Cost return by (Yrs.)
H-1	425998	360	2088	17
H-2	397644	280	1949	17
H-3	410777	360	2013	17

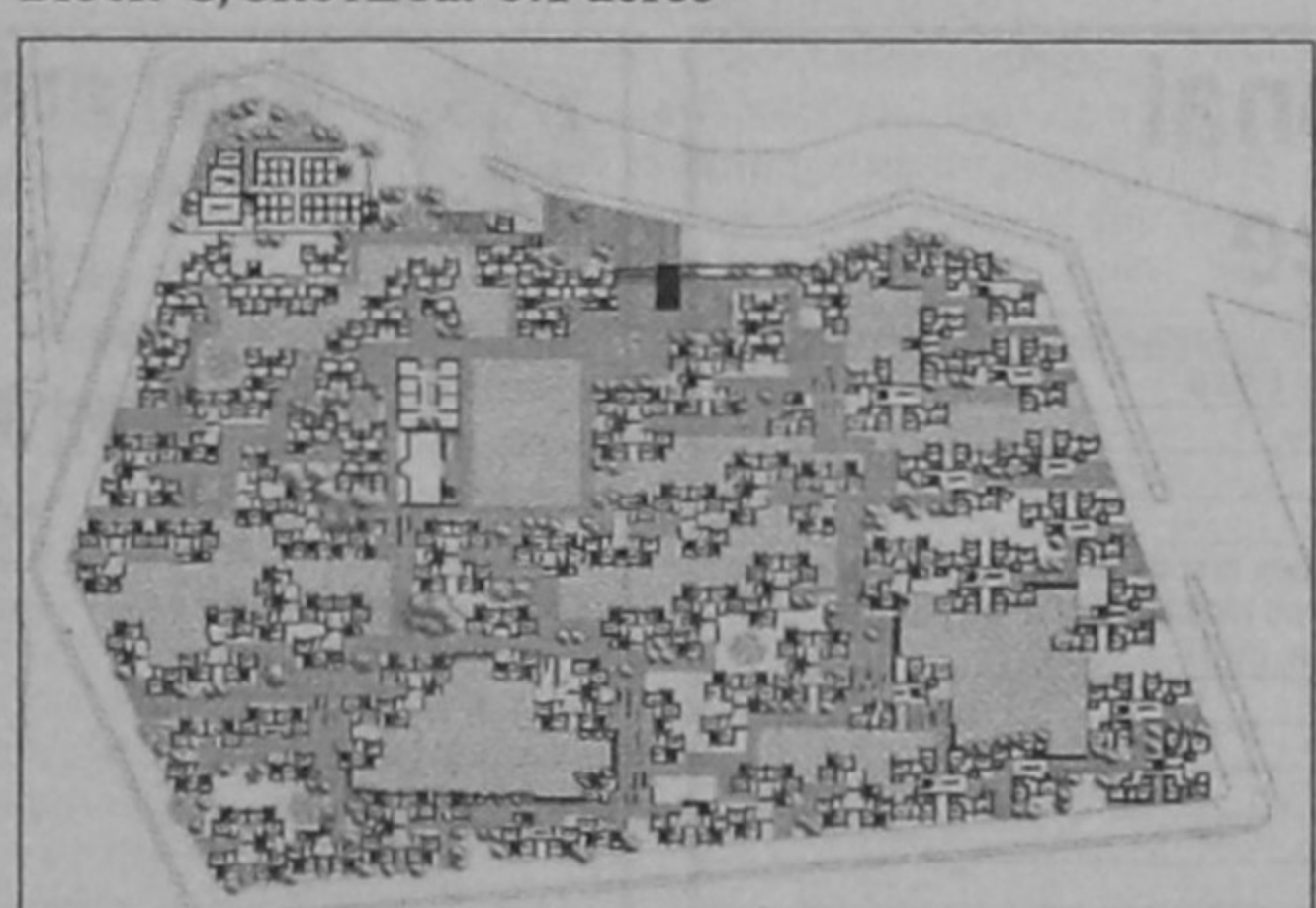


Floor Plan: Type H2



Floor Plan: Type H3

Design Proposal: KALSHI 2; Location: Bauniabandh, Block-C; Site Area: 9.1 acres



Proposed Housing at Kalshi 2

Design Concept: The concept was to create an organic plan from Architect Charles Correa's concept of Belapur

Income group (Tk./month)	Unit Type	Unit Area (sq.ft.)	Per Unit Cost	Cost Return (in Tk. & Years)		
				Rent/ Month	Return by	Return by
3,000 - 5,000 (LIG)	A	499.87	4,99,870	1800	24	24
5,000 - 10,000 (LIG)	B	601.60	6,01,600	2500	20	20
10,000 - 15,000 (MIG)	C	615.44	6,15,440	3000	18	18

while restricting access of vehicles and providing a curvilinear walkway for the residents rather than the monotonous gridiron patterns through sharing of services. The idea originated

Housing (India) Design Consideration

- Community facilities have been given more importance.
- More than one-fifth of the site area has been proposed

as open green space.

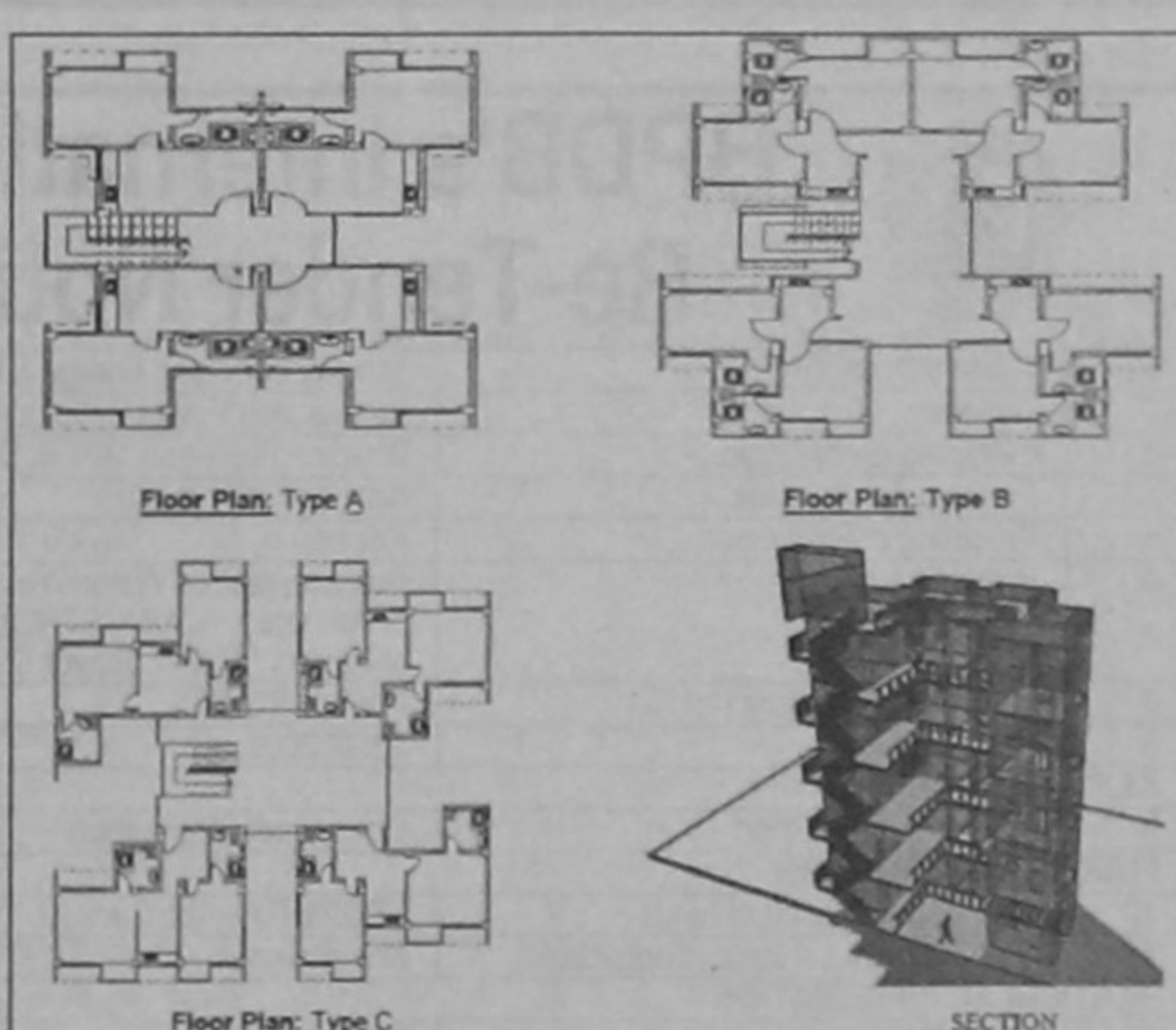
- Income level of the residents of the site has been considered carefully in the proposed housing design.

Housing Unit: Housing unit is

proposed considering income level of the inhabitants of the area:

Proposed Land use: The total land area is distributed in the following ratio: Built space 51%, Road 26% and Green space 33%.

Density: 210 household/ acre. **Note:** Existing site condition: Same as the previous. Unit Feature: Bedroom, Toilet, Kitchen (shared by 2 families) (for all 3 types)

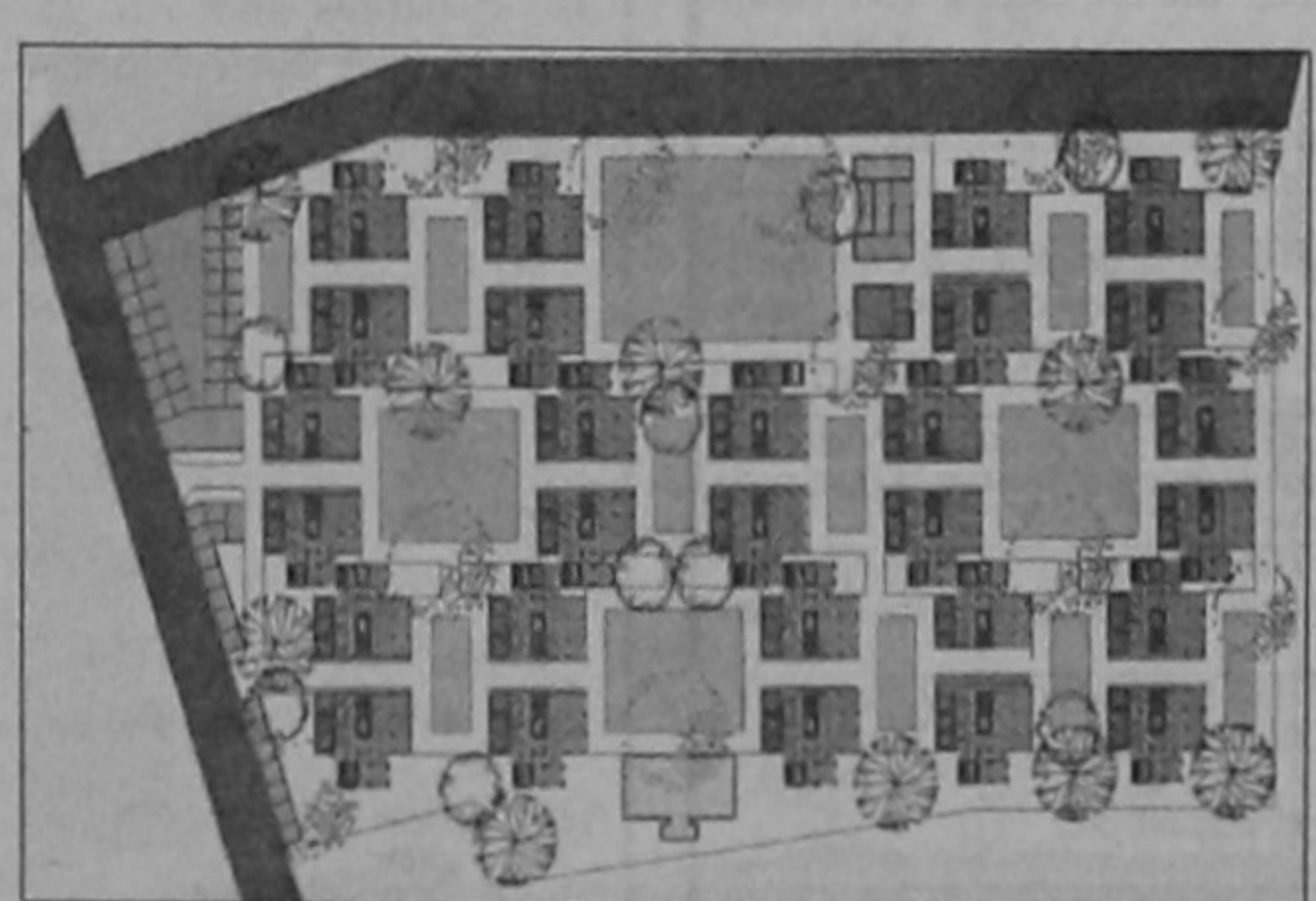


Floor Plan: Type A

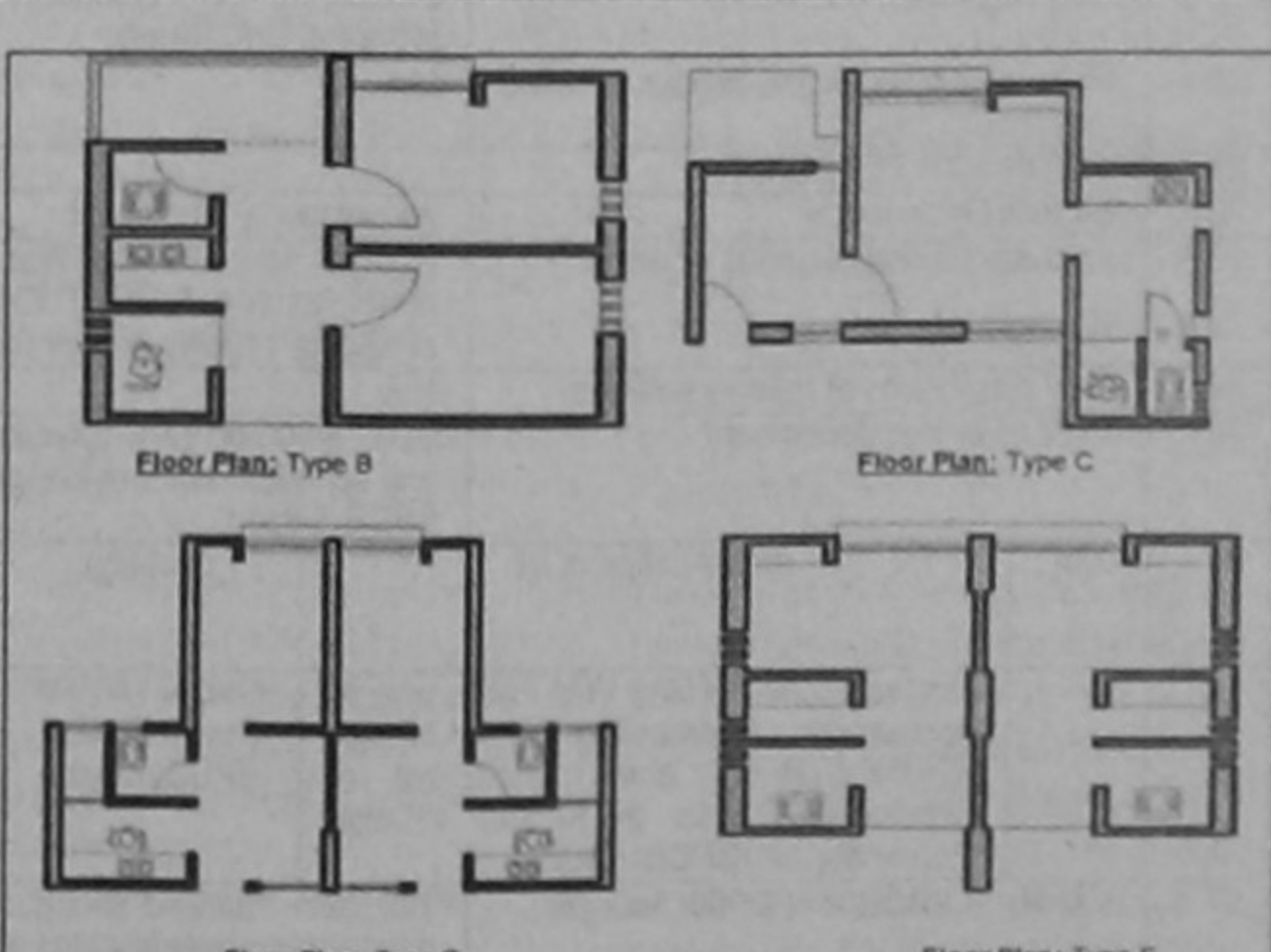
Floor Plan: Type B

Floor Plan: Type C

SECTION



Proposed Housing at Rayer Bazar



Floor Plan: Type A

Floor Plan: Type B

Floor Plan: Type C

Floor Plan: Type D

Floor Plan: Type E

The above design proposals have been developed by the following 4th year Architecture students, The University of Asia Pacific: Sadmin Sadiana, Siam Sajid, Raiyan Islam Shantani & Anjuman Ara Laboni (Korail); Ali Zashor Sayed, Abdullah-Al-Zahid Khan & Ishrat Sultana (Kalshi 1); Saleha Begum, Jesmin Ara Bhuiyan & Hayatul Islam, (Kalshi 2); Saddam Hossain, Inn Akhter & Md. Ismail Parvez (Rayer Bazar)

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