

ISSN 2072-0149

The AUST

Journal of Science and Technology

Volume-5

Issue-1

January 2013

(Published in January 2014)



**Ahsanullah University
of Science and Technology**

EDITORIAL BOARD

Prof. Dr. Kazi Shariful Alam
Treasurer, AUST &
Head, School of Business, AUST

Prof. Dr M.A. Muktadir
Head, Department of Architecture, AUST

Prof. Dr. Md. Anwarul Mustafa
Head, Department of Civil Engineering, AUST

Prof. Dr. S. M. Abdullah Al-Mamun
Head, Department of Computer Science & Engineering, AUST

Prof. Dr. Abdur Rahim Mollah
Head, Department of Electrical & Electric Engineering, AUST.

Prof. Dr. Mustafizur Rahman
Head, Department of Textile Engineering, AUST.

Prof. Dr. AFM Anwarul Haque
Head, Department of Mechanical and Production Engineering, AUST.

Prof. Dr. M. Shahabuddin
Head, Department of Arts & Sciences, AUST

EDITOR

Prof. Dr. Kazi Shariful Alam
Treasurer
Ahsanullah University of Science and Technology

Documentation on Five Colonial Buildings of Panam Nagar: Structure, Material, Decoration and Ornamentation

Shirajom Monira Khondker*

***Abstract:** Colonial architecture in Bengal was an aristocratic style which was created by the ruling class as a symbol of power, dignity and artistry. The rich cultural heritage and cultural identity of Bangladesh is vividly expressed and traversed during this period. In this paper the author selected Panam Nagar, is a unique and old settlement as a part of Sonargaon area of Bangladesh, because the Panam group of monuments bears testimony to the style and design of Colonial architecture and also is the identity of our cultural heritage. To preserve and represent cultural heritage or the glorious past of a society, the documentation of architectural heritage is of enormous importance. This study concentrates on the documentation of the selected five different types of buildings of Panam which have precious and research worthy information. The focus of the study is to demonstrate the structure, materials, decoration and ornamentation, for representing own belief and cultural exclusivity to the architecture.*

***Keywords:** Colonial Architecture, Panam Nagar, Structure, Material, Decoration - Ornamentation.*

1. Introduction

1.1. Setting:

Colonial Architecture in Bengal:

The British introduced new elements from the western architecture and merged those elements with the traditional provincial style of the Mughals. Thereby, a new hybrid style emerged known as the Indo-British or the Colonial style (Mowla and Reza 2000: 31-58). On the other hand, the Colonial architecture in Bangladesh mean a combination style of European and indigenous architecture which is

* Assistant Professor, Department of Architecture, Ahsanullah University of Science and Technology, Dhaka.

reflected more in the secular civic buildings than those of the buildings of religious character. The Colonial architecture is characterized by these structure-types (Hussain, 2007).

An important feature of Colonial architecture in Bengal is the expansive use of various structure- types hitherto unknown. Though this Colonial architectural style was developed by the British-Raj, the follow up was made by the local Zamindars and the Kolkata based merchants, known as *baniyas* (Hussain, 2007). Because of it's fanciful and romantic character the style even persists today in the minds of those who love history and tradition. In Bengal, one of the most significant examples of Colonial architecture named Panam Nagar, a residential quarter of Sonargaon, represents the Indo-British architectural style with improvised architectural ornamental features. They are extraordinary in a sense that nowhere in the whole of Bengal such a large assemblage of residential buildings exists (Rahman, 2007).

Panam Nagar:

Panam Nagar is the colonial city which is a part of Sonargaon area, the administrative center of medieval Muslim rulers of East Bengal from early thirteenth century and today the area falls under Narayanganj district, Bangladesh. Panam Nagar was established in the late 19th century (Fig-01 & 02) as a trading center of cotton fabrics during British rule. Hindu cloth merchants built their

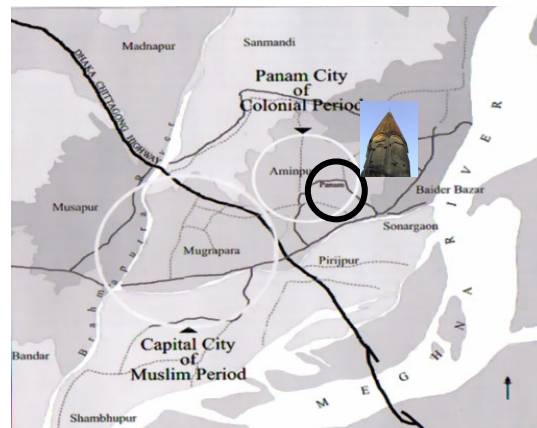


Figure-01: The Political Map of 19th century of Bengal Region Showing Panam Nagar in Sonargaon area.

(Source: "Our Glorious Past"–Pub. In August 2002).

residential houses following Colonial architectural style with inspiration derived from European sources. With respect to location and layout, the Panam's buildings are mostly concentrated along the Panam Street, 5m wide on the average and 600m in length along which most of the old buildings of Panam Nagar are concentrated, and surrounded by canals.

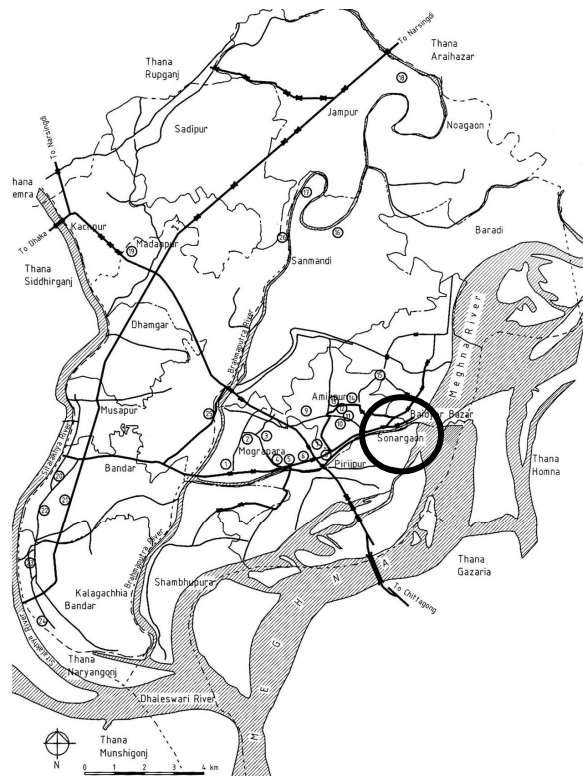


Figure-02: The location map of Panam Nagar in Sonargaon locality.
 (Source: Shaikh, "Twenty five Buildings-frozen museum of Panam Nagar"-Pub. December 2009).

Colonial Buildings of Panam Nagar with their Present Status

Panam Nagar locality is highly dense with single to three storied attached and detached houses of varying types and sizes. The number of the houses which were erected in the Panam area is counted presently at sixty on both the side of the Panam Street (Fig-03).

Among them fifty-two houses in dilapidated and disused condition in the settlement have been identified. At present 31 houses are surviving on the north side of the road and 21 houses on the south. Exact count of buildings according to the number of floors cannot be done due to poor accessibility and precarious condition of structure. The buildings of Panam Nagar are mostly rectangular in shape and elongated in the north-south direction. The depth is greater than frontage in most houses. Average facade width varies between 6 to 9 meters. Facades of all buildings are axially balanced with three, five, seven and nine openings. The floor levels are expressed externally with projected cornice. Parapets followed a uniform design and heights with vertical slit openings, rounded at the top and bottom. Raised plinth and verandah created the transition space between the inner house and the street.

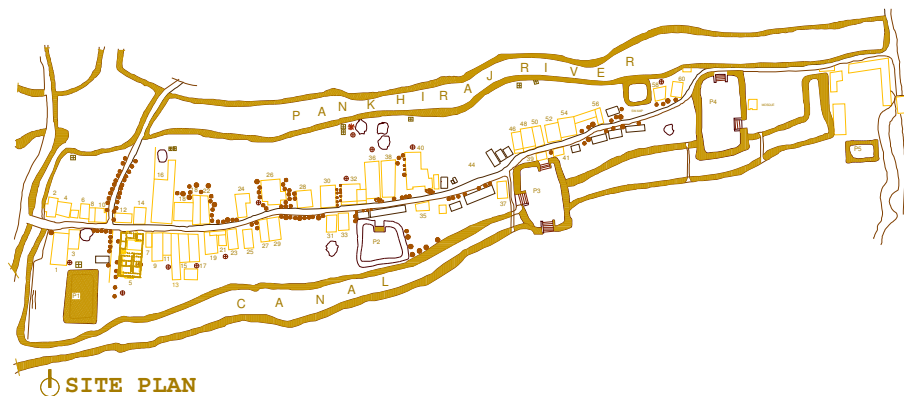


Figure-03: The Existing Master Plan of Panam showing the sixty buildings.
(Source: Field Study, 2006).

Panam as a historical property is under the ownership of the Government of Bangladesh. The Directorate of Archaeology is its custodian. Most of the inhabitants in Panam are unauthorized occupants. They are too poor to maintain those properties. A new tin shed structure has been built recently in 1979 in the plot next to building no. 3 occupied by Sonargaon Juba Sangha - the youth club. Here a chart (Table-01) of present status of the buildings of Panam Nagar with their height / storey and uses is attached below:

Table-01: Present status with uses of the buildings of Panam Nagar

Building no.	Building name	Buildings height/Storey	Present condition	Uses of buildings
1	Nil	2	Medium	Residence
2	Nil	2	Bad	Residence
3	Nil	2	Medium	Residence
5	Sonargaon Museum	2	Medium	Staff Quarter
6	Nil	2	Very Bad	Shop
7	Nil	3	Very Bad	No Use
8	Nil	1	Very Bad	Residence
9	Nil	1	Very Bad	Residence
10	Nil	1	Very Bad	Residence
11	Nil	2	Bad	Residence
12	Nil	1	Bad	Residence
13	Rajia Monjil	2	Medium	No Use
15	Rajia Monjil	2	Bad	No Use
16	Niharika	2	Very Bad	Ansar, VDP Office
17	Nil	2	Medium	Panam Art Gallery and Residence
18	Progressive Life Insurance Company	2	Medium	Office
19	Nil	3	Very Bad	Residence
20	Nil	2	Bad	Residence
21	Nil	2	Medium	Residence
22	Nil	2	Bad	Residence
23	Nil	2	Bad	Shop and Residence
24	Nil	2	Very Bad	No Use
25	Nil	2	Bad	Residence
26	Sonargaon GR Institution	2	Medium	Teacher's Quarter
27	Nil	2	Bad	Residence
28	Nil	2	Very Bad	No Use
29	Nil	2	Bad	Residence
30	Nil	2	Bad	Residence
31	Nil	2	Medium	Residence
32	Nil	3	Very Bad	Residence
33	Nil	3	Very Bad	Residence
34	Nil	1	Medium	Residence
35	Nil	1	Bad	Puja Ghar
36	Sonargaon Art Gallery	2	Medium	Art Gallery
37	Nil	1	Bad	Residence
38	Kashinath Bhaban	2	Medium	Sonargaon Museum Staff Quarter
39	Nil	2	Medium	Residence

40	Green Child Kinder garden	2	Medium	School
41	Nil	2	Medium	No Use
42	Nil	2	Very Bad	No Use
46	Nil	2	Medium	Residence
48	Nil	2	Medium	Residence
50	Nil	2	Medium	No Use
52	Nil	2	Medium	No Use
54	Nil	2	Bad	Residence
56	Nil	2	Bad	Residence
58	Nil	2	Medium	No Use
60	Nil	1	Very Bad	No Use

(Source: Prepared by the author on the basis of Field Study, 2006).

1.2. Building Typology

Basically the dwelling houses of Panam Nagar can be classified into four typologies according to building layout design. They are briefly describing bellow:

a) Central Courtyard Type:

The concept of this type building is derived from centering on a courtyard. In this type the central courtyard means that the building activities and layout are arranged around the courtyard.

b) Central Hall Type:

The design of central hall type generated with a double height covered hall room as the main focus of the layout plan.

c) Consolidated Type:

The buildings without any inner court or hall are group to this typology. Majority of houses in Panam Nagar belong to this typology. The consolidated types are designed with either an entrance portal or a verandah or a high plinth as transition space from street to inner house.

d) Compartment Type:

Few example of this type exist in Panam Nagar, either with single compartment or multiple compartments. Single compartment type comprises single room, where as multiple compartment type comprises row of rectangular rooms which were placed side by side.

1.3. Objective of Study

The main objective of the study is to explore and document the structure and construction materials, decorations and ornamentations of the five different types of buildings of Panam Nagar which belongs to Colonial architecture in Bengal. The objective also includes finding out the influences and importance of the structure and construction materials, decorations and ornamentations of those five different types of buildings of Panam Nagar which represent our glorious past.

1.4. Method of Study

To ensure the quality of the study and proper documentation the author conducted a field survey (in 2006) on the selected five buildings of Panam Nagar, a locality of historical Sonargaon. In selecting those buildings the author selected almost all different types of buildings in Panam Nagar which have precious and research worthy structure, materials, decoration and ornamentation. Several field visits have been conducted by the author (in 2006) to collect or examine the above details. An adequate number of photographs of those five different types of buildings have been taken by the author for the study. Some of these have been presented in this paper. For the documentation on those five buildings the author has to draw necessary drawings with details regarding the buildings on the basis of field study (in 2006). Some other sources e.g. books, journal articles, encyclopedias, photographs have been consulted for this study.

2. Documentation of Five Colonial Buildings

2.1. Selection Criteria:

In this paper the author selected five colonial buildings of Panam Nagar on the basis of building typology (almost all different types of buildings in Panam) with their precious and research worthy structure and materials, architectural decoration and ornamentation detail drawings. These selected five colonial buildings number are 38, 40, 01, 31, and 42. The author select the building no. 38 as an exceptional example of the central courtyard type building where on end of the court is lined with the boundary wall, the building no. 40 as an example of the central courtyard type building, the building no. 01 as

an example of the central hall type building, the building no. 31 as an example of the consolidated type building, and the building no. 42 as an example of the compartment type building for the documentation.

2.2. General Description of Five Colonial Buildings:

A) Building no. 38:

This unique two-storied colonial building is known as Kashinath Bhaban. This building is an exceptional example of the central courtyard type building where on end of the court is lined with the boundary wall. The facade of this building is perfectly expressed the desire for simplicity among ornately decorated work.



Figure-04: The front view of Building no. 38 known as Kashinath Bhaban.

(Source: Field Study, 2006).

B) Building no. 40:

This colonial building is named as Green Child Kinder Garden. The building is two storied, while only a broken facade of the upper floor with no roof is standing. This building is a true example of a central courtyard type building.



Figure-05: The front view of Building no. 40.

(Source: Field Study, 2006).

C) Building no. 01:

This colonial building of Panam Nagar, located at the right side of the street immediately after the entrance to the area. In the double height central hall room on the ground of the two-storied building, there is a *bedi* or raised platform built-in at the northern side for sitting.



Figure-06: The front view of Building no. 01.

(Source: Field Study, 2006).

D) Building no. 31:

This building located at the south side of the street. Construction period of this building was 1928 AD, which one possibly is the last building built on the Panam Nagar street. This two storied consolidated type building is more responsive to tropical climate as transparent front verandahs give the impression of an extrovert house.



Figure-07: The front view of Building no. 31.
(Source: Field Study, 2006).

E) Building no. 42:

This two-storied multiple compartment type building is located at the north side of the street. This colonial building style shows remarkable Mughal architectural decorative features. Thus this building was probably built in the late Mughal mid eighteenth century.



Figure-08: The front view of Building no. 42.
(Source: Field Study, 2006).

2.3. Documentations:

A) Building no. 38:

Here a chart (Table-02) of basic information of the building no. 38 (Fig-05.g) for the documentation is given bellow:

Table-02: A chart of basic information of the Building no. 38

Characteristics of the building	View or Image	Description
1. Building type	Fig-9,10 a,b,c,g,h	This is a courtyard type building; where on end of the court is lined with the boundary wall.
2. Building layout	Fig-09. a, b, c	Rectangular in shape and elongated in the north-south direction. The width and length of the building facade is approximately 10.7m and 37m respectively.
3. Structure and Materials	Fig-09, Fig-10	Bricks are plastered for facade delineation. Cast iron brackets, ventilators, window grills, railings, balusters had been extensively used. Ornamentation was made by lime <i>surki</i> and plaster. Decoration with <i>chinitikri</i> work has been done in the columns of the front facade.

4. Architectural Decoration and Ornamentation	Fig-09, Fig-10	The facade was articulated by round columns with Corinthian capital (upper floor) and Corinthian pilaster (ground floor), flanking five openings at each level. The upper floor columns have <i>chinitikri</i> decoration consisting of dark color spiral band in a distinct pattern. Corner of the building is emphasized with decorative floral treatment. Cast iron arch openings, railings, key-stones, column capital, base etc. have been thoroughly decorated.
5. Entrance	Fig-09.d Fig-10.g	The entry is well emphasized with extremely decorative exterior front facade through a raised plinth and verandah.
6. Building condition	Fig-09, Fig-10	At present existing interior building condition is good for living after reconstruction of the building.

B) Building no. 40:

Here a chart (Table-03) of basic information of the building no. 40 (Fig-06.a) for the documentation is given bellow:

Table-03: A chart of basic information of the Building no. 40

Characteristics of the building	View or Image	Description
1. Building type	Fig-11. a,b,c,d	This building is a true example of a central courtyard type building.
2. Building layout	Fig-11. c, d	Rectangular in shape and elongated in the north-south direction. The width and length of the building facade is approximately 14m and 30m respectively.
3. Structure and Materials	Fig-11, Fig-12	Bricks are entirely left exposed for facade delineation. Cast iron ventilators, window grills, railings had been used. Ornamentation was done by lime <i>surki</i> and plaster in the arch opening.
4. Architectural Decoration and Ornamentation	Fig-11, Fig-12	The central part with five bay openings is flanked on two sides. Among two types of column systems; one is rectangular column with molded base on the ground floor and the other is round column with rectangular base on the upper floor. Two rectangular corner rooms flanking both sides of the entry and series of colonnaded arches create a harmonious composition.
5. Entrance	Fig-11, a, e	This building has a well-emphasized entry, which did not use any projected entrance portico for the purpose.
6. Building condition	Fig-11, Fig-12	At present existing interior building condition is good for using after reconstruction of the building.

C) Building no. 01:

Here a chart (Table-04) of basic information of the building no. 01 (Fig-08.a) for the documentation is given bellow:

Table-04: A chart of basic information of the Building no. 01

Characteristics of the building	View or Image	Description
1. Building type	Fig-13. a, b	This is a central hall type building; which is generated with a double height covered hall room.
2. Building layout	Fig-13.b	Rectangular in shape and elongated in the north-south direction. Central hall is located on the ground floor.
3. Structure and Materials	Fig-13	Bricks are entirely left exposed for facade delineation with different sizes, shapes and layout patterns are used to curve out rich moldings and other designs. Bricks are also arranged over the window lintel. The mortar color of the exposed brick facade is red, laid plain. Cast iron ventilators, window grills, railings had been used.
4. Architectural Decoration and Ornamentation	Fig-13	Interior columns of the hall have Corinthian capitals, but compound piers are combined with such capitals in front of the <i>bedi</i> . The surface of the columns is covered with <i>chinitikri</i> floral decoration. The parapet, window size, pilaster and the corner treatment which together provide a symmetrical facade with five openings at each level.
5. Entrance	Fig-13.c	On the ground floor there was a short projected entrance portico with pair of round columns on both sides.
6. Building condition	Fig-13	At present existing interior building condition is good for using as the residence purpose.

D) Building no. 31:

Here a chart (Table-05) of basic information of the building no. 31 (Fig-09.a) for the documentation is given bellow:

Table-05: A chart of basic information of the Building no. 31

Characteristics of the building	View or Image	Description
1. Building type	Fig-14. a,b,c,d	This is a building of consolidated type; which is generated without any inner court or hall.
2. Building layout	Fig-14. b, c, d	Rectangular in shape and elongated in the north-south direction. The width and length of the building facade is approximately 5.6m and 13.8m respectively.
3. Structure and Materials	Fig-14, Fig-15	Bricks are plastered for facade delineation. Cast iron columns extended to the upper level were used in front of the entrance verandah. Cast iron brackets, ventilators, window grills, railings, balusters had been extensively used. Roof stands on rafter and purlin made of wood in this house. On the top of upper level verandah, corrugated sheets were placed sloping down towards the road. Colored tiles were used on the floor after the entrance verandah.
4. Architectural Decoration and Ornamentation	Fig-14, Fig-15	A repetition of the decorative elements borrowed from the previous period buildings can be seen. Round cast iron poles are connected with cast iron arch that used intricate and elaborate floral pattern.

5. Entrance	Fig-14. a, e	This building is designed with an entrance verandah as transition space from street to inner house.
6. Building condition	Fig-14, Fig-15	At present existing interior building condition is good for using as the residence purpose.

E) Building no. 42:

Here a chart (Table-06) of basic information of the building no. 42 (Fig-11.a) for the documentation is given below:

Table-06: A chart of basic information of the Building no. 42

Characteristics of the building	View or Image	Description
1. Building type	Fig-16.a Fig-17. e, f, g	This is a building of multiple compartment type; where lower floor of this building consists of three rooms placed one after another. The upper floor has an open court located at the center of the spatial planning used as a forecourt to the temple.
2. Building layout	Fig-17. e, f, g	Rectangular in shape and elongated in the north-south direction. The width and length of the building facade is approximately 3.7m and 10.2m respectively.
3. Structure and Materials	Fig-16, Fig-17	Bricks are plastered for facade delineation. The hut-shaped <i>do-chala</i> structure used on rooftop in part of this building. This part with the pitch roof was used as a <i>mandir</i> – a place of worship by the Hindus. Here architectural and ornamental features, various sculptural details and moldings done with plaster in lime mortar.
4. Architectural Decoration and Ornamentation	Fig-16, Fig-17	The hut-shaped <i>do-chala</i> rooftop of this building is an elegant feature taken from Mughal ornamentation and style. Also in this building; use of short column, various sculptural details and moldings, well proportioned multiple cusps decorations over the openings were borrowed from late-Mughal period. The openings are flanked by short columns. In this building the use of blind arches is being noticeable.
5. Entrance	Fig-16.a Fig-17.h	This building is designed with a direct entrance which has a formal balanced decorative exterior facade.
6. Building condition	Fig-16, Fig-17	At present existing interior building condition is very bad for using as any purpose.

3. Analysis of Structure and Construction Materials of the Buildings Studied

The prime construction material, i.e. Bricks of Panam, have been modeled for these selected five colonial buildings in different shape like rounded, angular, arched, pointed semi-circular, curvilinear etc according to the need of surface articulation. Bricks are either

plastered in building no. 38 (Fig-04), 31 (Fig-07) and 42 (Fig-08) or left exposed for facade delineation in building no. 40 (Fig-05) and 01 (Fig-06). Angular brick masonry has been used in the area between the spring point and the crown of the arch, most probably for structural reasons. In these buildings the thickness of brick masonry walls varies between 50 to 70 cm. Primarily for bonding lime mortar have been used in these buildings. Roof stands on rafter and purlin made of wood especially in building no. 31 (Fig-15.h). Hut-shaped *do-chala* rooftop covered the small rooms, used in building no. 42. Plaster decoration have been extensively applied in facade design and interior decoration, extensively used in building no. 38. Cast iron brackets, ventilators, window grills, balusters had been extensively used in these buildings, especially used in building no. 31 (Fig-15.i). Colored glass and glazed tiles were applied for decoration in the entrance verandah of the building no. 31 (Fig-15.g) and 38. Decoration with broken china locally known as *chinitikri* work was very popular in interior decoration especially used in building no. 38 (Fig-10) and modest exterior application is also found in these selected five colonial buildings.

4. Analysis of Decoration and Ornamentation of the Buildings Studied

The ornamentation of these selected five colonial buildings of Panam Nagar is unique through combination of different types of decorative form and motifs from various sources. The ornamentations of these buildings are expressed through decorations on plinth and floor projection, door and window openings, pillars and pilasters, space between the arch and the roof, cornice and parapet, railing, bracket, building edge and ceilings etc. The plinths of these buildings are fairly raised from the road and those are decorated with single, double and triple moldings respectively depending on the height of the plinths which have neat cement in building no. 38, 01, 40, 42 or colored tiles in building no. 31.

In these selected five colonial buildings the design of the entrance formed the focus of the facade composition. Entrances are usually designed with Corinthian type columns, semi-circular arches with

pediments and various other decorative. Here in these five buildings doorways are regular and simple. The windows are mostly designed with semi-circular arches enclosed in a rectangular or square frame. The semicircular arched opening supported on slender Corinthian type columns or pilasters are common features of verandah and open corridor design for these buildings. Closed window, blind arches and shuttered doors create a noticeable tendency to illusionist representations used in building no. 38 & 42. For the exterior and interior decoration of these buildings regional floral pattern are used to express a local identity. The pillars, columns and pilasters are all designed with well-defined base, shaft and capital.

5. Discussion

According to the above documentation of five colonial buildings (building no. 38, 40, 01, 31 and 42) with their analysis of structure, construction materials, decoration and ornamentation details; a consolidated table is needed which is given bellow:

Table-07: Consolidated Table of Five Colonial buildings

Characteristics of the building	Building no. 38	Building no. 40	Building no. 01	Building no. 31	Building no. 42	Remarks
Plan	Rectangular in shape and north-south elongated. Width and length is 10.7m and 37m respectively.	Rectangular in shape and north-south elongated. Width and length is 14m and 30m respectively.	Rectangular in shape and north-south elongated. Central hall is located on the ground floor.	Rectangular in shape and north-south elongated. Width and length is 5.6m and 13.8m respectively.	Rectangular in shape and north-south elongated. Width and length is 3.7m and 10.2m respectively.	All these five colonial buildings are Rectangular in shape and north-south elongated.
Elevation and Section	Bricks are plastered for facade delineation.	Bricks are entirely left exposed for facade delineation.	Bricks are entirely left exposed for facade delineation.	Bricks are plastered for facade delineation.	Bricks are plastered for facade delineation.	Bricks are either plastered or entirely left exposed.
Structural system	Thickness of brick masonry wall varies between 50 to 70 cm.	Thickness of brick masonry wall varies between 50 to 70 cm. Bricks are arranged over the window lintel.	Thickness of brick masonry wall varies between 50 to 70 cm. Bricks are arranged over the window lintel.	Thickness of brick masonry wall varies between 50 to 70 cm. Roof stands on rafter and purlin made of wood in this house.	Thickness of brick masonry wall varies between 50 to 70 cm. Hut-shaped <i>do-chala</i> rooftop used in part of the building.	The main structural system of these five buildings was made of Brick with wooden rafter and purlin.

Material and Construction	Prime construction material was Brick & for bonding use lime mortar. Ornamentation was made of lime <i>surki</i> & plaster. Cast iron details were used.	Prime construction material was Brick & for bonding use lime mortar.	Prime construction material was Brick & for bonding use lime mortar. Ornamentation was made of lime <i>surki</i> & plaster.	Prime construction material was Brick & for bonding use lime mortar.	Prime construction material was Brick & for bonding use lime mortar. Ornamentation was made of lime <i>surki</i> & plaster.	For all these five buildings brick was the prime construction material & for bonding use lime mortar.
Decoration	Round columns with <i>chinitikri</i> decoration in upper floor & Corinthian pilaster in ground floor.	Rectangular column with molded base on the ground floor and round column with rectangular base on the upper floor.	The surface of the columns is covered with <i>chinitikri</i> floral decoration.	Repetition of the decorative elements like cast iron railings, window grills, arch etc. are extensively used.	Multiple cusps decorations over the openings & the use of blind arches.	Decoration expressed through all over the buildings with extensive detailing.
Ornamentation	The building is extensively ornamented with floral treatment. Cast iron arch openings, railings, column capital, base have been thoroughly ornamented.	Ornamentation was done by lime <i>surki</i> and plaster in the arch opening. Series of colonnaded arches are used here.	The parapet, pilaster and the corner treatment which together provide a symmetrical facade with five openings at each level.	Round cast iron poles are connected with cast iron arch that used intricate and elaborate floral pattern.	Mughal ornamentation and style. Use of short column, various sculptural details and moldings made of lime <i>surki</i> & plaster.	The ornamentations of these buildings are expressed through their decorations.

6. Conclusion

From the aforesaid discussion it is apparent that the colonial architecture developed in Bengal, had an individuality of its own. As a reflection of Colonial architecture, the ancient Panam Nagar settlement is undoubtedly made a profound contribution to the socio-cultural history and heritage of Bangladesh. Panam's Buildings with their structure and materials, decoration and ornamentation is unique which make a strong and glorious image of our past. Presently, Panam Nagar is striving to survive among the face of contemporary developments, climatic adversaries, misuse and scarcity. Recently the archeology department of government of Bangladesh, as a part of taking an action in preservation process, colored almost all the

historical buildings into Pink color. This has a destroying impact in the structural, materials, and architectural ornamentation details gradually, which were the historical and socio-cultural evidence of our past.

On the above circumstances an authentic documentation on the historical buildings of Panam Nagar is topmost need. In this regard the author tries to present a research worthy documentation (based on the field study in 2006) on five different types of buildings of Panam Nagar which will help the present and future generation to tell our true socio-cultural historical past.

11. References

1. Husain A.B.M., 1997 *Sonargaon-Panam: A Survey of Historical Monuments and Sites in Bangladesh*.
2. Rashid, M.H. and Chowdhury A.M. (Ed.) published by Asiatic Society of Bangladesh, Dhaka: 103-133.
3. Rahman S.M. (Ed.), 2007, Archeological Heritage, Dhaka: Asiatic Society of Bangladesh. *Cultural survey of Bangladesh series-1*.
4. Husain A.B.M. (Ed.), 2007, Architecture, Dhaka: Asiatic Society of Bangladesh. *Cultural survey of Bangladesh series-2*.
5. Shaikh, Z.U. and Rahman M., December 2009, *Twenty Five Buildings-Frozen museum of Panam Nagar*, Old but New : New but Old, Architectural Heritage Conservation, Rahman M. (Ed.), published by UNESCO.
6. Mowla, Q.A. and Reza, M., 2000, Stylistic Evolution of Architecture in Bangladesh, *Journal of the Asiatic Society of Bangladesh*, Vol. 45, No.1:31-58.
7. Mowla, Q.A. 2000, Colonial Urban Morphologies: an inquiry into typology and evolution pattern, *Khulna University Studies*, Vol.2. no.1: 45-62.
8. Mowla, Q.A., Panam Nagar : Conservation and Management for Posterity, Bangladesh University of Engineering and Technology (BUET), Dhaka-1000, BANGLADESH.
9. Akhter, S., 2004 *Panam Nagar, The Ancient City of Bengal: In Search of Continuity in Tradition*, Unpublished M.Arch thesis at Carleton University, Ottawa, Canada.

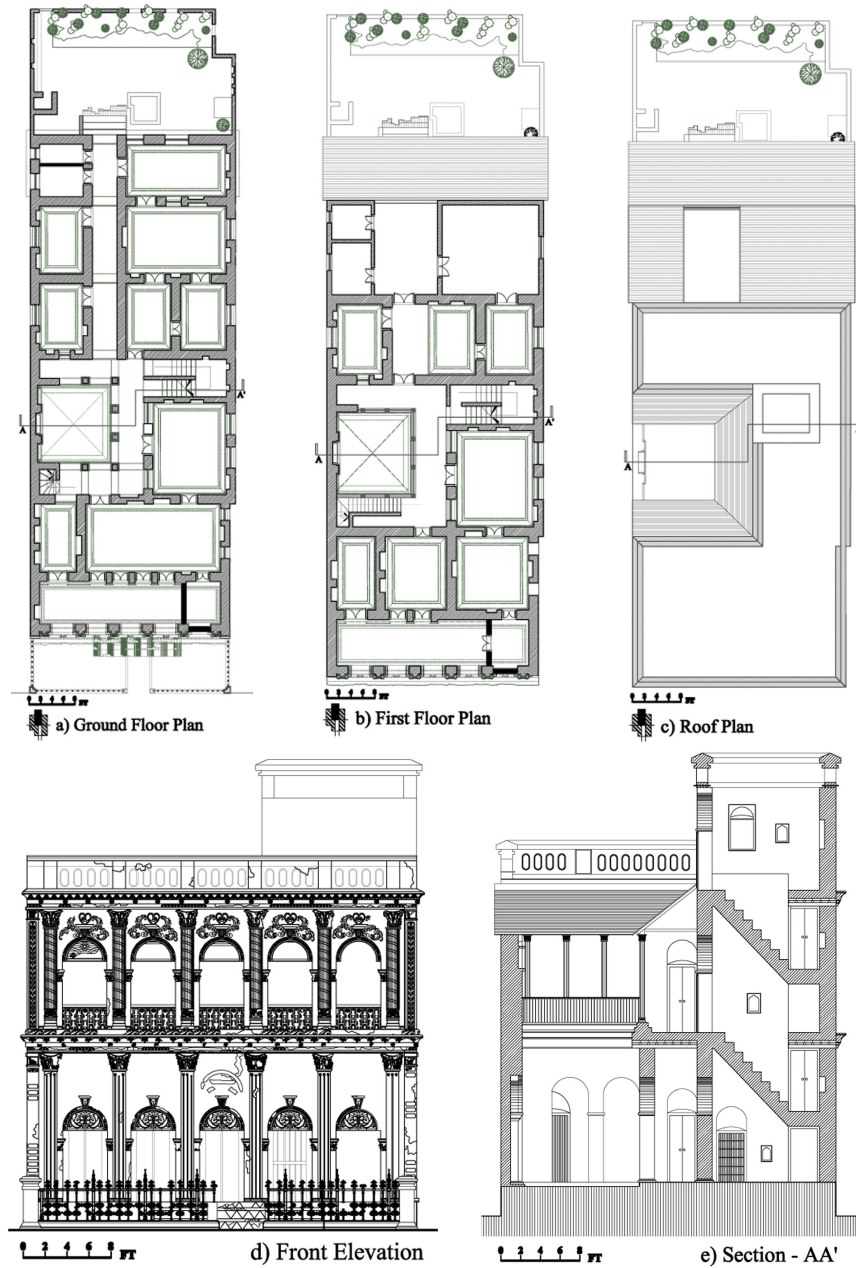
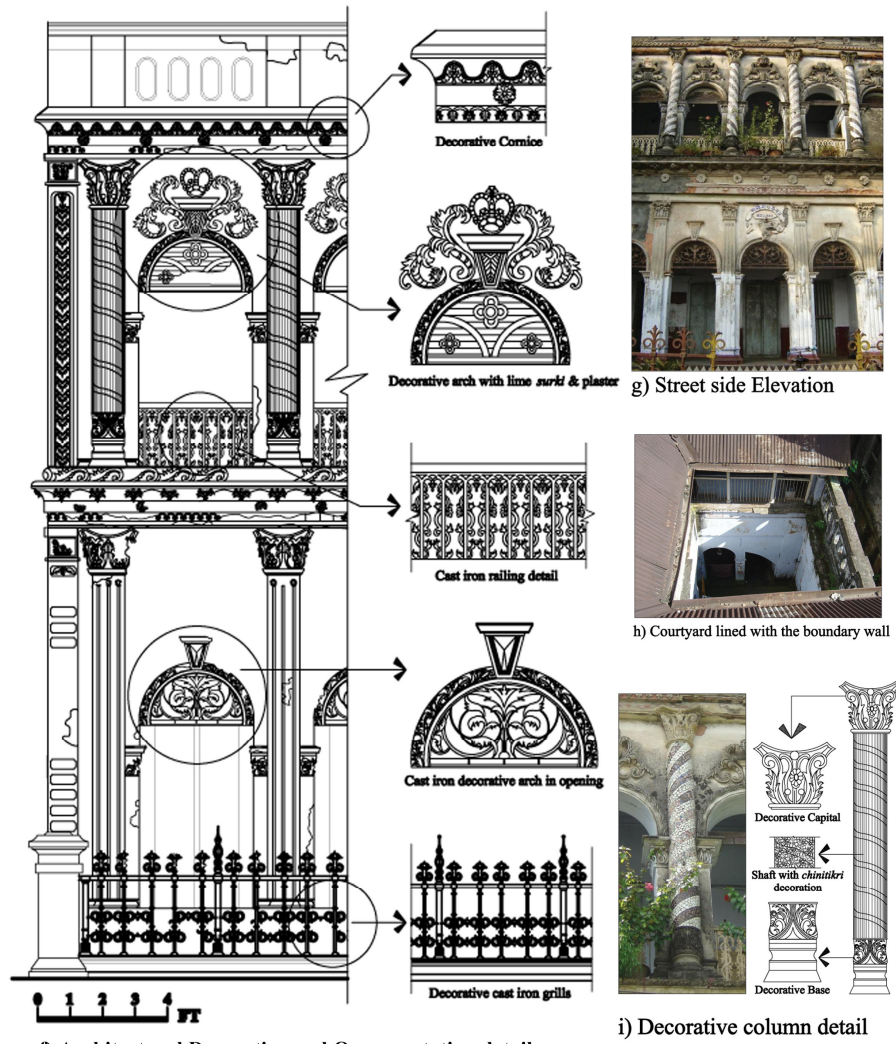


Figure-09: a) Ground Floor Plan, b) First Floor Plan, c) Roof Plan, d) Front Elevation with decorative exterior facade, and e) Section-AA' of the Building no. - 38.

(Source: Field Study, in 2006 and prepared by the author)



f) Architectural Decorative and Ornamentation details

i) Decorative column detail

Figure-10: f) Architectural Decorative & Ornamentation details, g) Street side view, h) Courtyard lined with the boundary wall, and i) Decorative column detail of the Building no. - 38.

(Source: Field Study, in 2006 and prepared by the author)

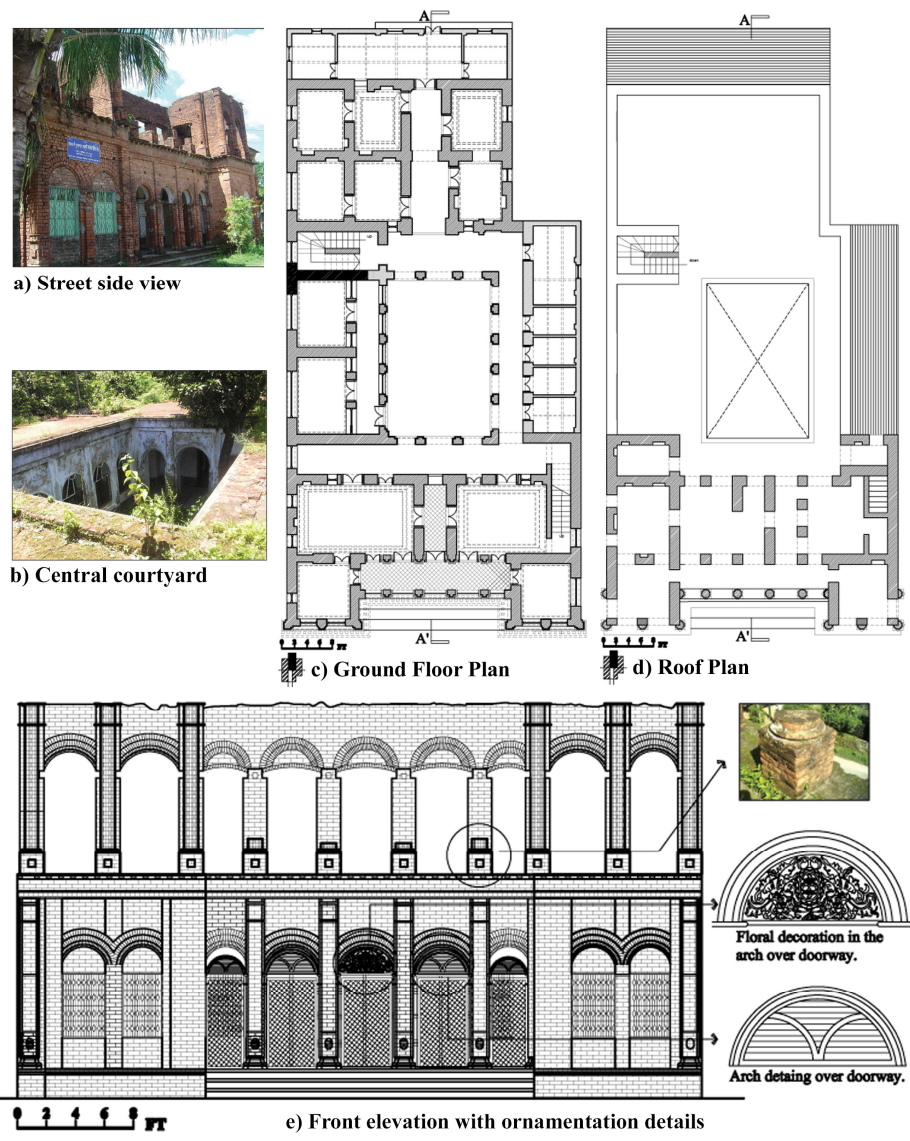


Figure-11: a) Street side view, b) Central Courtyard, c) Ground Floor Plan, d) Roof Plan, and e) Front Elevation with ornamentation details of the Building no. - 40.

(Source: Field Study, in 2006 and prepared by the author)

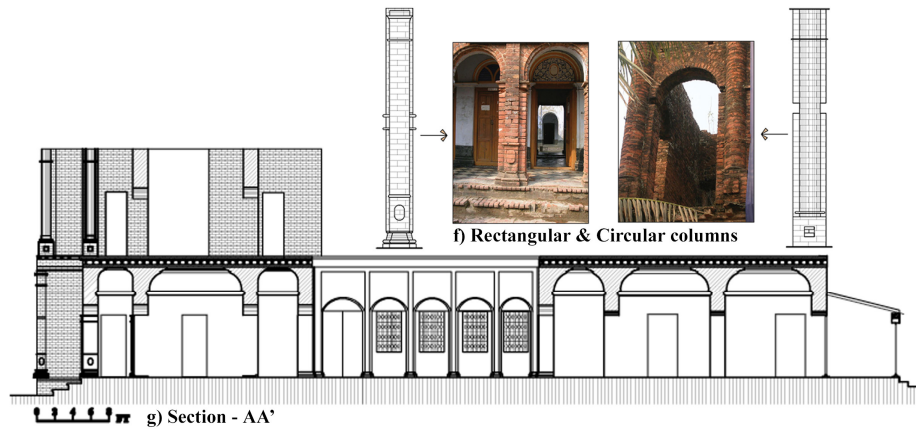


Figure-12: f) Rectangular and Circular Columns, and g) Section-AA' of the Building no. - 40.
 (Source: Field Study, in 2006 and prepared by the author)

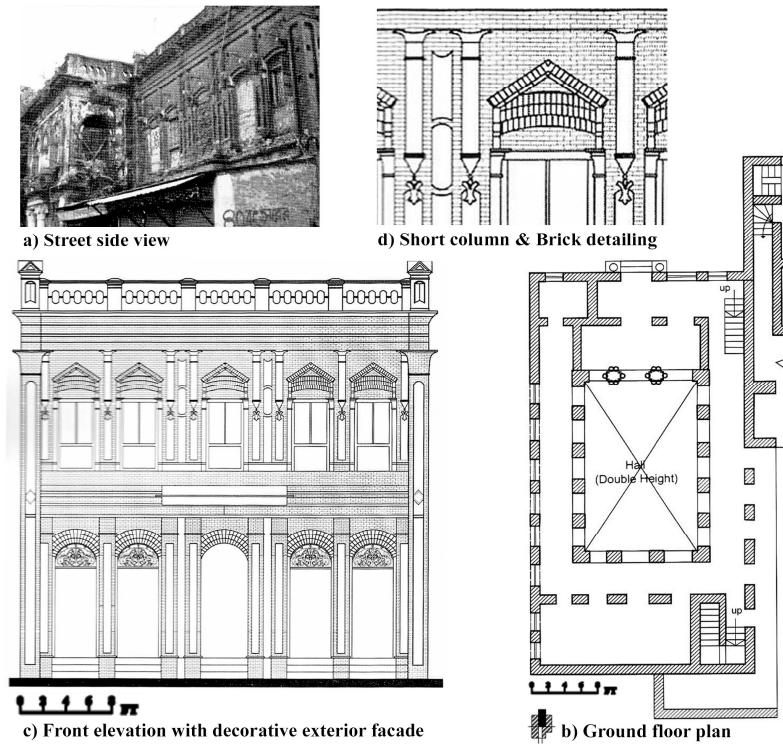


Figure-13: a) Street side view, b) Ground floor plan, c) Front elevation, and d) Short column & Brick detailing of the Building no. - 01.
 (Source: Field Study, in 2006 and prepared by the author)

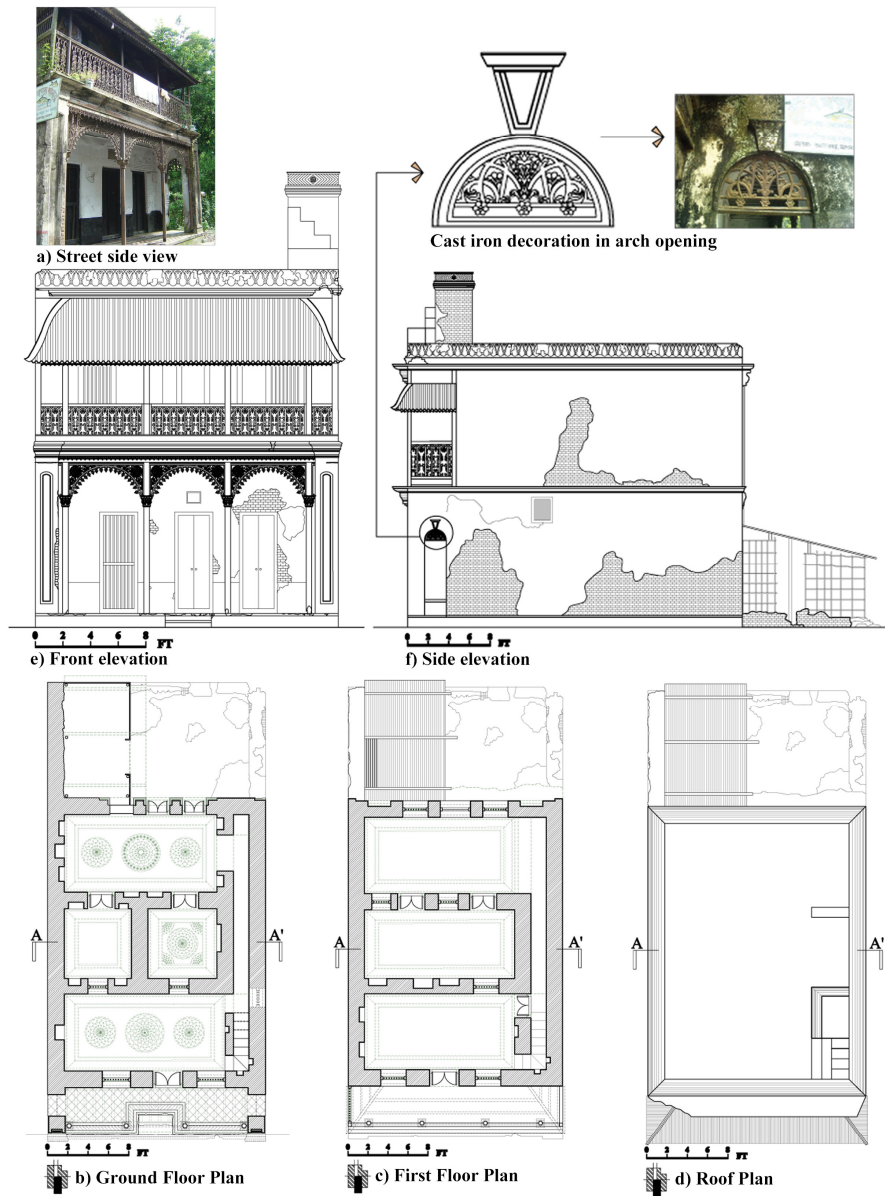


Figure-14: a) Street side view, b) Ground floor plan, c) First floor plan, d) Roof plan, e) Front elevation, and f) Side elevation of the Building no. - 31.

(Source: Field Study, in 2006 and prepared by the author)

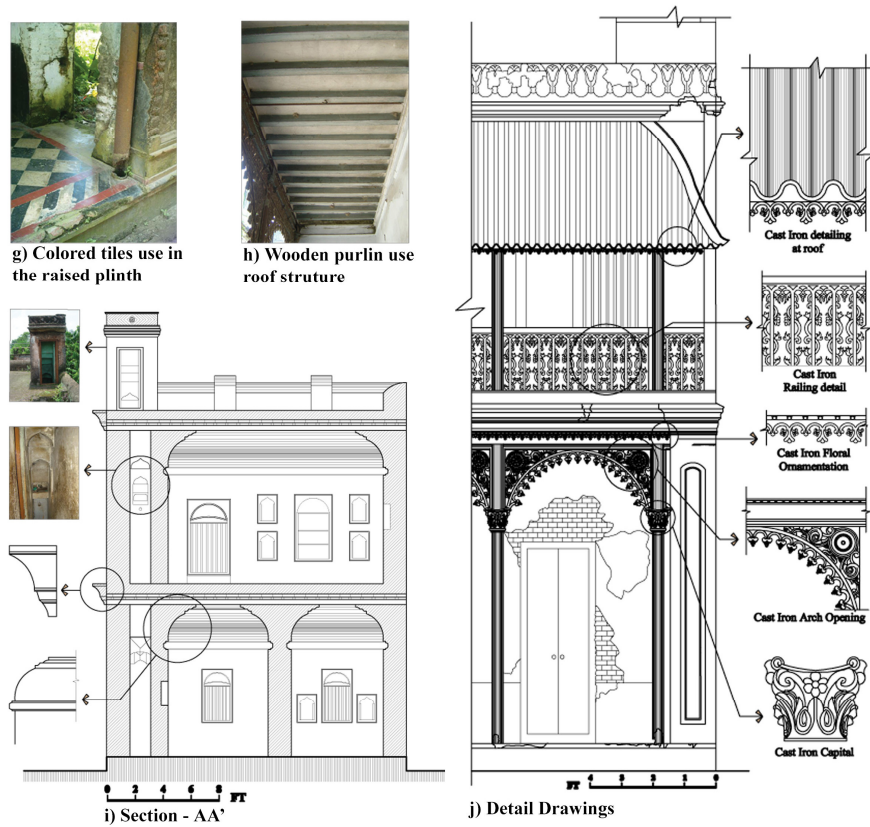


Figure-15: g) Colored tiles in plinth, h) Wooden purlin, i) Section-AA', and j) Detail Drawings of Building no. - 31; (Source: Field Study, in 2006 and prepared by the author)

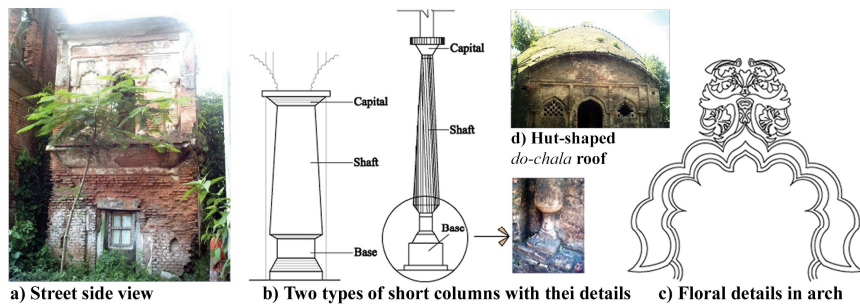


Figure-16: a) Street side view, b) Two types of short column, c) Floral details in arch, and d) Do-chala roof of the building no. - 42; (Source: Field Study, in 2006 and prepared by the author)

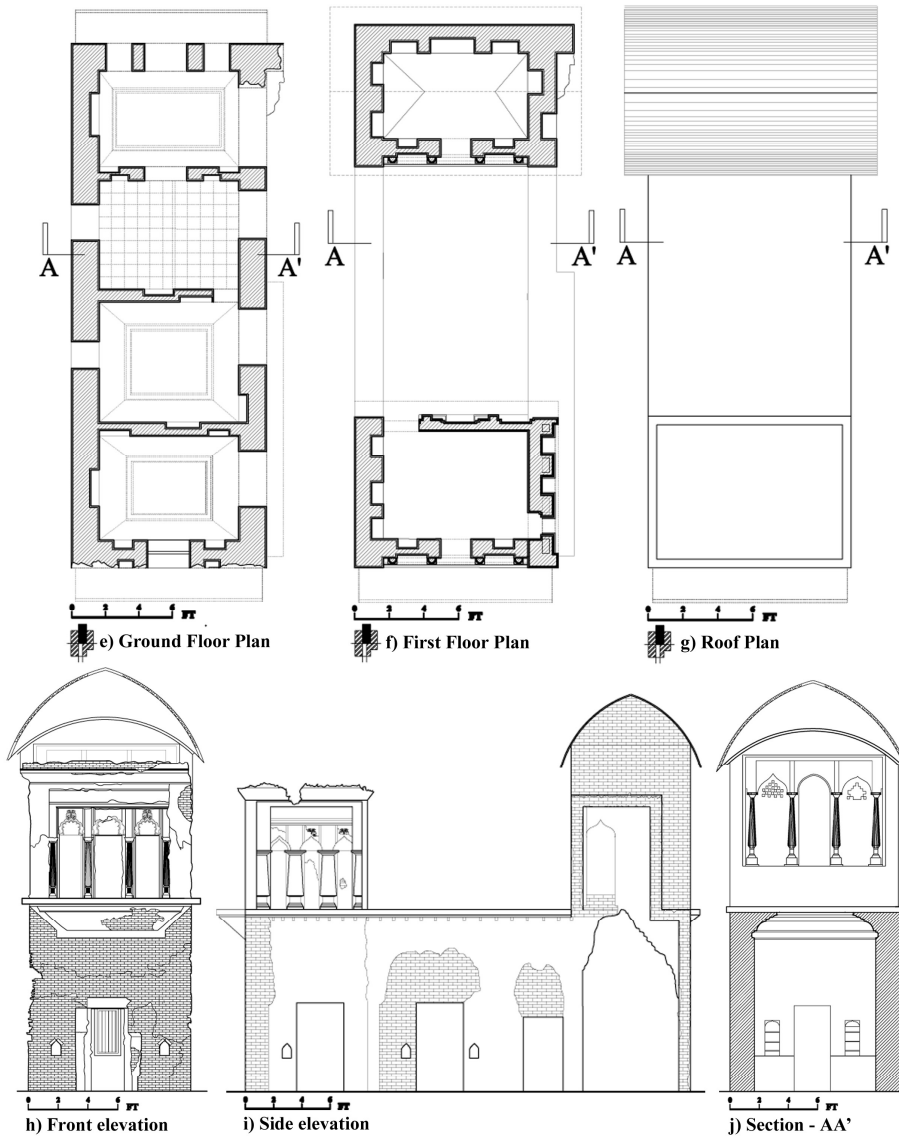


Figure-17: e) Ground floor plan, f) First floor plan, g) Roof plan, h) Front elevation, i) Side elevation, and j) Section-AA' of the building no. - 42.
(Source: Field Study, in 2006 and prepared by the author)