Trade Facilitation Centre & Crafts Museum, Varanasi

Project Information Memorandum for Selection of Management and Operation Agency (excluding Crafts Museum operations)



# Table of Contents

A.The F	Region: Varanasi4	
i.	Background:	4
ii.	Location:	4
iii.	Connectivity:	4
iv.	Heritage and Culture:	5
٧.	Economic Overview of Varanasi	5
vi.	Tourism:	5
vii.	Manufacturing Industry:	7
viii.	Retail Sector:	7
ix.	Hospitality and MICE Sector:	8
B.The F	Project: Trade Facilitation Centre and Crafts Museum (TFC&CM), Varanasi12	
i.	Background and Information:	12
ii.	Site Location and Connectivity:	16
iii.	SWOT (Strength, Weakness, Opportunity and Threats) Analysis for TFC&CM	17
C.Selec	ction of Concessionaire for Operation and Management of TFC18	
Annexu	ure 1: Detailed Project Description :	
i.	BLOCK 1: MARTS CUM OFFICE BLOCK:	23
ii.	BLOCK 2: CONVENTION CUM EXHIBITION HALL:	26
iii.	BLOCK 3: FOOD COURT CUM GUEST HOUSE:	28
iv.	BLOCK 4: SHOPING ARCADE	
٧.	BLOCK 5: CRAFTS MUSEUM	
vi.	BUILDING INFRASTRUCTURE AVAILABLE	34
vii.	DESCRIPTION OF AVAILABLE FURNITURE	37
Annexu	ure 2: Comprehensive detail of infrastructure available at TFC&CM:	
Annexu	ure 3: Drawings for TFC&CM:52	

## DISCLAIMER

Note: This document has been prepared by NHDC solely for the purpose of providing information to potential bidders. It is provided on a confidential basis and is not to be distributed or reproduced in whole or in part without the prior written consent of NHDC. This document does not purport to contain all the information that a potential partner or any other interested party may require. It does not take into account the individual circumstances, financial situation, investment objectives or requirements of a potential bidders or any other person. It is intended to be used as a guide only and does not constitute advice, including without limitation, investment or any other type of advice. The information contained in this document does not constitute any offer or contract, including for sale or otherwise. Any potential partner or any other interested party should obtain independent financial, taxation, accounting, legal and other advice to assist them in making their own decisions and assessment appropriate to their circumstances. NHDC and its advisors assume that any person who reads or uses this document is capable of evaluating the merits and risks of any investment or other decision with respect to a property transaction, its suitability and its financial, taxation, accounting and legal implications without any reliance on this document. This document may contain information prepared by third parties. Figures, calculations and other information contained in this document that has been provided to NHDC by third parties have not been independently verified by NHDC. Any projections or analyses represent best estimates only and may be based on assumptions, which, while reasonable, may not be correct. Past performance of any property described in this document is not a reliable indication of future performance of such property. At all times, NHDC acts as an Authority only. Except where otherwise provided, all references to rent, income or price are Tax/GST exclusive. Users should not rely on any information contained in this document as a statement or representation of fact and must make their own enguiries to verify and satisfy themselves of all aspects of such information, including without limitation, any income, rentals, dimensions, areas, zoning and permits. While the information in this document has been prepared in good faith and with due care, no representations or warranties are made (express or implied) as to the accuracy, currency, completeness, suitability or otherwise of such information. NHDC, its advisors, officers, employees, subcontractors and agents shall not be liable (except to the extent that liability under statute or by operation of law cannot be excluded) to any person for any loss, liability, damage or expense arising directly or indirectly from or connected in any way with any use of or reliance on such information. The RFP stage for selection of Private Partner will be independent of the EOI stage proposed in this document.

## A. The Region: Varanasi

## i. Background:

Varanasi, or Banaras/Benaras, (also known as Kashi) situated on the banks of the river Ganges in the Indian state of Uttar Pradesh is one of the oldest living cities in the world. The city is called Kasi, "the luminous" in the Rigveda. It is often referred to as "city of temples and learning." Only through this city, the River Ganga flows South to North having the world famous Ghats on the left crescent-shaped bank of the river Ganga.

The city is heterogeneous with multiple layers of religion, culture, art forms, believes nature, profiles and individualities. It is a sacred and holy place to Hindu, Buddhist, Jain and Muslim religion. For every visitor Varanasi has a different experience to offer.

The present area under Municipal Corporation of Varanasi (MCV) jurisdiction is 79.79 sq. km with a population of 14,32,300 (as per census year 2011). Owing to its rich tourism potential, the estimated daily flow of tourists and pilgrims to the city is 15,000 i

#### ii. Location:

Varanasi region is located in the eastern part of the State of Uttar Pradesh, comprising the districts of Varanasi, Bhadohi (Sant Ravidasnagar), Jaunpur, Ghazipur, Chandauli and Mairzapur.

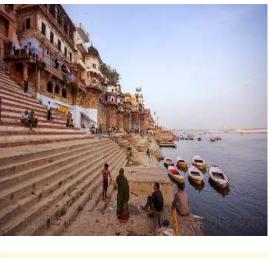
## iii. Connectivity:

Varanasi can be reached through air, rail and road based modes.

**By Air:** Lal Bahadur Shastri International Airport is located at Babatpur in Varanasi, about 22 km from core city. Various prominent airlines such as Air India, Indigo, Jet Airways, Spice Jet, Thai Smile and Vistara operate regular air services from Varanasi to major cities such as Delhi, Mumbai, Kolkata, Bengaluru, Bhubaneswar, Goa, Trivandrum, Ahmedabad, Srinagar, Bangkok, Sharjah, Colombo etc.

**By Rail:** Being located in the heartland of the North Indian plains, Varanasi is well connected by rail network both nationally and regionally. City is served by three major railway stations, with two at city center viz. Varanasi Cantonment station and Varanasi City Railway Station and one at Mughal Sarai just 10 kms south of Varanasi.

By Road: With three national highways i.e. NH-2, NH-56 and NH-29 and four state highways i.e. SH-







73, SH-74, SH-87 and SH-98 Varanasi is well connected both nationally and regionally. The city has two bus terminals viz. one at Cantt. area and another named Kashi depot at Golgadda. The distance from the major cities are Delhi-750 km, Kolkata - 683, Lucknow-286 km and 125 km from Allahabad.

i Statistics received from UP state tourism department for 2015.

The upcoming bypass (expected to be completed in 2017) between NH-29 (Varanasi-Gorakhpur Road) and NH-56 (Varanasi-Sultanpur Road) shall reduce travel time from the airport.

Intra-city: The movement within the city is a mix of Taxis Autos, cycle rickshaws, private vehicles, and walk (by foot is the only way to see the waterfront and the Ghats).

#### iv. Heritage and Culture:

Varanasi is an eclectic mix of the Tangible and Intangible heritage, manifested in its rich Cultural Landscapes. The tangible heritage includes the 84 Ghats, more than 3500 temples and mosques, Sarnath and Banaras Hindu University. Sarnath, located just 12 km from Varanasi, is the site where Gautama Buddha first taught the Dharma after his enlightenment. Sarnath is one of four holy Buddhist sites sanctioned by the Buddha himself for pilgrimage.

The intangible heritage includes the natural landscapes, and the cultural heritage as a center of arts, crafts, music, education and learning.

#### v. Economic Overview of Varanasi

Varanasi is counted among most popular cities of India as it remains in lime-light and attraction among visitors. Varanasi's economy is primarily dominated by tourism, handloom, handicraft, educational, hospitality, MICE and Government sector. Tourism controls approx. 50% of city economy.

Presence of Cantonment area, Railway Factory (Diesel Locomotive Works), Bharat Heavy Electrical Limited manufacturing plant etc. generates number of vacancy and creates a base of salaried people in local economy. Small scale industries, Cottage industries form an important base for the economy of the city. Around 11% of the total population is engaged across different manufacturing activities whereas the tertiary sector accounts for 6.80% of the total employment.

With current development and growth of Varanasi, it has attracted more commercial and cultural activities as well. These activities are meetings of corporates, incentive programs, expos, exhibitions, seminars, business promotions and much more. Varanasi is also focal point of various cultural activities like weddings. Below is a brief review of the various factors contributing the city's economy

#### vi. Tourism:

Varanasi is one of the most visited tourist destinations of India. Total Inflow of Tourists (as per the data received from UP tourism) in the year 2015 was 57,16,297; in which domestic tourist's inflow is 95% of the total.

Month-wise statistics of tourist shows that the peak season for tourist inflow is between September to April, as all the important fairs and festivals occur within these months. **'Education and research'** is the first priority by International Tourists, and **'pilgrimage/spiritual tour'** is the main reason that attracts maximum percentage of domestic tourists. The tourist inflow has had an annual growth of 4% per year and their average stay is analyzed as two days and one night.

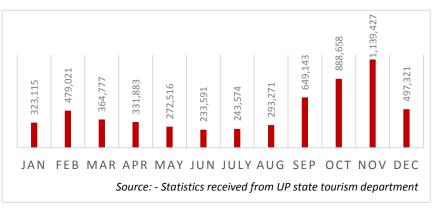
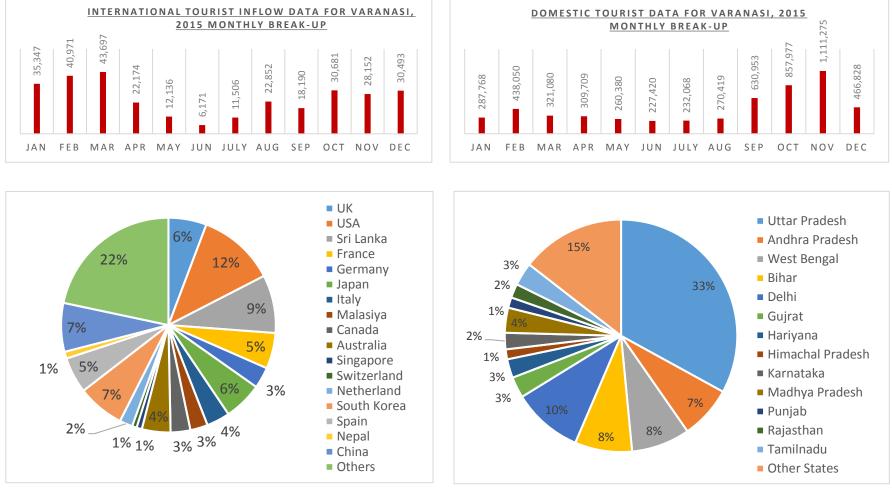


Figure 2: Total Tourist Data (international + domestic) for Varanasi, 2015



Source: - Statistics received from Regional Tourist Office, Varanasi

Figure 3: International & Domestic Tourist Data for Varanasi, 2015

Many other sectors are dependent on tourism industry like hotels, lodges, restaurants, handicrafts, handloom, transport, aviation etc. Tourism has good support to these sectors. Being a pilgrimage destination, tourism is an evergreen source of income. It is the tourism that has spread Varanasi sarees, carpets, handicrafts and other products to different corners of the world.

#### vii. Manufacturing Industry:

Varanasi is home to manufacturing of world famous indigenous products. **Handloom and handicraft industry** in Varanasi region has played a major role in its trade and commerce. Some of the Varanasi region products that play key role in its economy are described below:

Handloom and Handwoven Products: The export of handloom products from India stood at US\$ 360.02 million in FY2015-16 ... US has been the major importer of Indian handloom products, followed by UK, UAE, Italy, Germany, France, Spain, Japan, Netherlands, and Australia. Varanasi dominates the handloom production. Of the total units, the share of Varanasi households engaged in handloom related activities is about 32 percent iii.

As per the recently secured GI iv certificate, Banarasi products fall under four classes (23–26), namely silk brocades, textile goods, silk saree, dress material and silk embroidery. This means that no saree or brocade made outside the six identified districts of Uttar Pradesh, that is Varanasi, Mirzapur, Chandauli, Bhadohi, Jaunpur and Azamgarh districts, can be legally sold under the name of Banaras saree and brocade.

- Handicraft Products: According to the provisional data of EPCH for FY2016-17 v, India's Handicrafts export have shown an annual increase of 13.79% in Rupees term and has reached to Rs. 24530 crores. For centuries, Varanasi has played major role in handicraft production and is known for its high quality handicraft items like copperware, brassware, wood and lac turnery, repousse, wood carving, Meenakari, Zardozi, glass bangles, clay toys etc. Varanasi's hallmark is the Sindora, vermilion boxes and it's Zardozi badges are commissioned by the Army, Navy and institutes including the European Catholic clergy among others.
- Carpets and Durries: Varanasi region is home to the largest hand-knotted carpet weaving industry hub in South Asia. It has a major cause for India being consistently a world leader in export of hand-made carpets with its durries and carpets being exported to more than 70 countries including USA, Germany, Canada, U.K., Australia, South Africa, France, Italy, Brazil and of late China <sup>ii</sup>.

The Indian Institute of Carpet Technology, the only institute of its kind in Asia, was established there in 2001 by the Ministry of Textiles and offers B-Tech courses in carpet and textiles technology.

## viii. Retail Sector:

The city retail particularly high-streets is driven by Handloom and Handicraft products which are witnessing increasing demand in Indian and International markets as clear from aforesaid analysis. These products are manufactured locally in Varanasi and adjoining districts like Mirzapur, Badohi, Jaunpur, Chandauli etc. However, these products are being mostly sold in high-street markets located in a scattered manner across various locations in the city and **there are no integrated facility housing Handloom and Handicraft sectors under one single roof**.

<sup>&</sup>quot; Source: IBEF: www.ibef.org

III Source: Planning Commission – UP State Development Report Volume II

GI (Geographical Indication) is an intellectual property right, which identifies a good as originating in a certain region where a given quality, reputation or other characteristic of the product is essentially attributable to its geographical origin.

v Source: www.epch.in/policies/eportdata.pdf

Varanasi houses a number of retail malls like PDR mall, IP Vijaya, JHV mall, Vishal Mega Mart etc. that also acts as a good source for augmenting Varanasi economy. The major retail high-streets of Varanasi city are Chowk, Gyan Vapi, Vishwanath Gali, Thatheri Bazar, Lahurabir, Godoulia or Dashswamedh Gali and Golghar. Below table is only for providing an indicative idea of the prevalent market rates as observed for retail sector.

Component	Avg. market rate in Varanasi Malls (INR/ Sq. Ft/ Month)	Avg. market rate in Varanasi High Street (INR/ Sq. Ft/ Month)
Shops/ Marts	60 to 110	40 to 80
Food Kiosk / Fine Dine Restaurants	40 to 80	40 to 80
Source: Discussion with various retail market players		

Table 1: Retail Market Rates, Varanasi

Source: - Market survey and secondary data

#### ix. Hospitality and MICEvi Sector:

**MICE Tourism**, the future of business tourism, is the next big growth engine of the global tourism industry. As per ICCA, Indian convention industry is currently at a nascent but growing stage, with a total of 116 Global conferences organized in the year 2014 -15 vii. India already has a host of locations which are well acclaimed MICE destinations which include Delhi NCR, Agra, Jaipur, Mumbai, Goa, Bangalore, Hyderabad, Chennai, Cochin, Bhubaneshwar etc.

Banaras (Varanasi) is also attracting corporates now who are heading here for business meets. annual meetings, conferences and awards ceremonies. According to the market sources in hospitality sector, such events have seen a fourfold increase in number in about one and a half years' time. New players in various sectors covering automobile, pharmaceuticals & healthcare, insurance, real estate, and other corporates across the spectrum have started coming to Banaras for business conferences from other cities in the last couple of years. From previously four-five events per year, it has now increased to at least 16-18 major events happening per year. This trend also helps ensuring maintaining hotels occupancy in range of 70 to 80 per cent even during the tourist off season in the city. As per market sources, some of the prominent facilities in this sector has seen business growth in MICE segment growing by 60 to 70 per cent, supported by business-cum-rejuvenation trips. Various attractions for business-cum-rejuvenation trips including beautiful Ghats, Ganga aarti, the Banarsi cuisine & culture and Banarsi saris, handloom and handicraft which add to the pleasure part of the trip. Corporate houses have begun to see a lot of potential in the city, as several development projects have been announced for Banaras. Several corporate houses have started opening their offices in the city as well, which was earlier confined to Lucknow, the state capital as per market sources.

Below table indicates that the MICE infrastructure available in the city are to the maximum capacity of 475 PAX, however for large international as well as national events, the average capacity required is in the rage of 1000 PAX and above. This clearly indicates a gap for such large infrastructure capable of holding prominent international as well as national conference and events.

 $<sup>\</sup>scriptstyle vi$  MICE (Meetings, Incentives, Conferencing, Exhibitions)

vii India Inbound MICE Tourism Report by FICCI, May 2016

Name of Hotel/Convention	Location	Category	Banquet / exhibition (theatre style seating capacity)	Conference Rates
The Gateway Hotel Ganges Varanasi	Nadesar	5 Star Deluxe	Nadesar Hall: 90 seats theatre Gulabbagh: 170 seats theatre Lawns total 40000 sq.ft	Rs 1200-1300 + taxes per person (2+2) AV as per actuals
Hotel Clarks Varanasi	Cantt.	5 Star	Amrapali: 300 seats theatre Siddhartha: 150 seats theatre Shakuntala: 180 seats theatre Mini Shakuntala : 40 seats theatre Vaishali: 40 seats theatre	Rs. 850 + taxes per person (2 + 2) AV as per actuals
Radisson Hotel Varanasi	Cantt.	5 Star	Jasmin combined: 125 seats theatre Rose room1: 75 seats theatre Rose room2: 175 seats theatre Jasmin lawns: 3396 sq.ft (200 seats theatre)	Rs. 900-950 + taxes per person (2 + 2) min. guarantee 25 PAX AV as per actuals (LCD Rs3000, Mic Rs800) Alcohol license Rs600 per bottle
Ramada Plaza JHV	Cantt.	5 Star	Shehani Hall: 475 theatre Sarangi Hall: 230 theatre Sarod Hall: 160 theatre Santoor: 250 theatre Garden: 15000 sq.ft Boardroom: 12 pax Live cooking option available	Rs. 1050-1200 + taxes (LCD projector w/screen Rs2500, Cordless mike800, P.A System (with speaker) Rs5000, Stage Rs40 per sq.ft + taxes)
Hotel Hindustan International (HHI)	Maldahiya	4 Star	Reagal: 250 theatre Pool Banquet: 300 theatre Kaveri: 35 theatre Imperial Lounge: 16 theatre	Rs. 9000-1000 + taxes per person (2+2)
Hotel Meraden Grand		4 Star	Largest : 300 Smallest : 50 Mandala: 300 theatre Vatika: 50 theatre Board Room: 15 seats Live cooking option available	Rs1700-2000 + taxes
Hotel Ideal Tower (The Amayaa)	Cantt.	3 Star	3 Halls, 325, 100 and 80 theater style,	Rs. 800 - 1000 + taxes per person
Hotel Surya	Cantt.	Heritage	3 Halls: 500, 250 and 80 theater style	Rs. 1.6 lakh + taxes for 500 pax hall per day without food

				Rs. 0.9 lakh + taxes for 250 pax hall per day without food
Diamond hotel	Bhelupur	1 Star	5 Halls Max capacity in theater style Largest : 100 Smallest : 20	800-900 per person +taxes
Pallavi International Hotel	Chetganj	Budget Hotel	5 Halls, Max capacity in theater style Largest : 300 Smallest : 200	800-900 per person +taxes
J.S. Residency	Bhelupur	Unclassified	2 Halls Max capacity in theater style Largest : 150 Smallest : 35	800-900 per person +taxes

 Table 2: Brief of market research on MICE infrastructure available along with names, locations, capacities, typologies, rates etc.:

 Source: - Market survey and secondary data

**Hospitality/Hotel** segment of Varanasi has been one of the most flourishing sectors in the region which is supported by the strong domestic and international tourist inflows all throughout the year as indicated in the aforementioned section on tourism sector. The city offers all segments of accommodation including Luxury, Heritage, budget, dormitory accommodation etc. Average occupancy levels for hotels in the city rages between 70%-80% with an average length of stay around 2 days and 1 night in the city.

Spiritual tourism also strongly supports this sector which has become a must visit destination for followers and disciples from all around the country and abroad due to spiritual importance of Varanasi and Sarnath. It also forms key part of in the Heritage Arc being promoted in Uttar Pradesh comprising Agra, Lucknow and Varanasi.

The major festivals and fairs organized in Varanasi are:

Festival / Fair	Month
Bharat Milap	Oct / Nov
Buddha Purnima	May
Dev Deepavali	Nov
Hanuman Jayanti	March / April
Mahashivaratri	Feb/ March
Nag Nathaiya	Nov / Dec
Nakkatayya	Oct
Ram Leela of Varanasi (spread over 30 evenings)	Sep / Oct

**Table 3**: List of key Festivals and Fairs in Varanasi**Source**: http://varanasi.nic.in/

Various star category hotels available in Varanasi are mentioned below:

Name of Hotel/Convention	Location	Category	Rooms	Rack Rate INR/ Night
The Gateway Hotel Ganges Varanasi	Nadesar	5 Star Deluxe	130	15500-23500
Hotel Clarks Varanasi	Cantt.	5 Star	104	9000-15000
Radisson Hotel Varanasi	Cantt.	5 Star	116	9000-15800
Hotel Rivatas by Ideal	Cantt.	5 Star	68	11500-15000
Ramada Plaza JHV	Cantt.	5 Star	120	7000 – 18000
Hotel Hindustan International (HHI)	Maldahiya	4 Star	98	7000-14000
Hotel Meraden Grand	Cantt.	4 Star	41	7500-15000
Hotel Pradeep	Jagatganj	3 Star	45	2500-2900
Hotel Ideal Tower (The Amayaa)	Cantt.	3 Star	58	10000-16000
Hotel Surya	Cantt.	Heritage	65	2500 - 3500
Diamond Hotel	Bhelupur	1 Star	40	4000-4500
Pallavi International Hotel	Chetganj	Budget Hotel	30	2800-6000
J.S. Residency	Bhelupur	Unclassified	24	3000-5600
Palace on Ganges	Assi Ghat	Unclassified	24	8500-10000
Suryauday Haveli - An Amritara Resort	Shivala Ghat	Unclassified	14	13500-17000

**Table 4**: Description of select hotel facilities in Varanasi**Source**: - Market survey and secondary data

## B. The Project: Trade Facilitation Centre and Crafts Museum (TFC&CM), Varanasi

### *i.* Background and Information:

The TFC & CM project located at Bada Lalpur, Varanasi, being developed by Ministry of Textile on 7.93 acres land and having constructed area of around 43,450 sqm. The project is expected to be completed by August 2017 and will offer facilities such as Convention hall, Exhibition area, Shops, Marts, Food Court, Restaurants, Guest Houses, Dormitories, Offices, Crafts Museum and Amphitheater along with support infrastructure and amenities focused at providing integrated platform for promotion of Handloom, Handicrafts and Carpet Sector of Varanasi region.



FACILITY CHART

Figure 4: Birds eye view of TFC&CM, Varanasi

Floors	BLOCK 1 Marts cum Office	<u>BLOCK 2</u> Convention Centre cum Exhibition	BLOCK 3 Food Court cum Guest House	BLOCK 4 Shopping Arcade	Entrance Plaza	BLOCK 5 Museum
Basement (2 levels)	Parking capacity (369 not	s of cars 434 no's of 2 wheelers	approx.)	-	-	

Ground Floor	<ul> <li>Marts (11 no's)</li> <li>Exhibition Space (open courtyard)</li> <li>Public Amenities</li> </ul>	<ul> <li>Convention Centre with VIP Lounge and green rooms.</li> <li>Atrium (Triple height)</li> <li>Exhibition Gallery</li> <li>Atrium and convention center can be converted to exhibition space.</li> <li>Public Amenities</li> </ul>	<ul> <li>Food Kiosks (9 no's)</li> <li>Kitchen Area/ Store</li> <li>Indoor Seating Area</li> <li>Courtyard Seating Area</li> <li>Public Amenities</li> <li>Courtyard can be converted to multi- purpose exhibition space.</li> </ul>	<ul> <li>Enquiry Counter</li> <li>Shops (14 no's),</li> <li>Space for Kiosks.</li> </ul>	Entrance Plaza with courtyard surrounded with 18 M high petals	Not applicable in the present scope of work
1st Floor	<ul> <li>Marts (13 no's)</li> <li>ATMs (2nos)</li> <li>Gallery (1no)</li> <li>Public Amenities</li> </ul>	<ul> <li>Marts (8 Nos)</li> <li>Exhibition Gallery all around atrium</li> <li>Public Amenities</li> </ul>	<ul> <li>Restaurants (2nos) with Kitchen Areas</li> <li>Public Amenities</li> </ul>	<ul> <li>Shops (14 no's)</li> <li>Lounge</li> </ul>		
2nd Floor	<ul> <li>Marts (15 Nos)</li> <li>Business Centre</li> <li>Public Amenities</li> </ul>	<ul> <li>Marts (4 Nos)</li> <li>Exhibition Gallery all around atrium.</li> </ul>	<ul> <li>15 Nos Dormitory Rooms (Total 81 Beds)</li> <li>Office Space</li> <li>Lounge Seating</li> <li>Public Amenities</li> </ul>	NA		
3rd Floor	<ul> <li>Marts (13nos)</li> <li>National Centre for Trade Information</li> </ul>	NA	<ul> <li>Double Occupancy Guest Rooms with attached toilets (18 no's),</li> <li>Common Hall and Pantry Office Space</li> <li>Public Amenities</li> </ul>	NA		

## Other Supporting Facilities provided are briefed below

- Surface Parking with Parking capacity (82 no's of cars approx.)
- Stand-by generator Supply and Uninterruptible Power Supply
- Central Air-conditioning and Ventilation System
- Kitchen and Food Kiosks provided with Exhaust System
- Lifts and Escalators
- Fire Detection, Firefighting and Public Address System
- EPBX, Server Room and BMSviii System

viii BMS (Building Management System)

- Rain Water Harvesting System
- Sewage Treatment Plant (STP)
- Fresh Water and Treated Water Supply
- Internal Electric Substation
- HVACix Plant Room
- Pump Room and Under Ground / Over Head Tanks
- Emergency exits for easy evacuation
- Interestingly landscaped and shaded courtyards with water bodies of international standard

ix HVAC (Heating, Ventilation and Air Conditioning)

### ii. Site Location and Connectivity:

The project is strategically located near the upcoming bypass (expected to be completed in 2017) between NH-29 (Varanasi-Gorakhpur Road) and NH-56 (Varanasi-Sultanpur Road) which shall reduce travel time to TFC from Varanasi Airport to 30 mins and from Sarnath to 20 mins. The location of the site also allows its connectivity to all prominent locations within Varanasi and Sarnath with a travel time of less than 1 (one) hour. The location is away from the congestions of the old Varanasi and also is expected to be the new growth corridor of development.



Figure 5: TFC&CM Location Map

#### iii. SWOT (Strength, Weakness, Opportunity and Threats) Analysis for TFC&CM

#### Analysis of Strengths

- a. Integrated marketing platform:
  - TFC&CM is an iconic structure designed as integrated marketing platform for handloom, handicraft and carpet sector players in the region,
  - It has one of the largest capacity convention centers in the region, and will play a major role in facilitating Varanasi region for its MICE activities,
- b. Centre of Tourism and Culture:
  - Region is a major attraction for national and international tourists with 84 Ghats, 3000 shrines, temples, among Sarnath, Kashi Vishwanath temples, Aarti at Ganga, 720 festivities celebrated annually, prominent center for Hindustani Classical Gharana etc.
  - It is a center for Ancient and Vedic learning Sanskrit and Ayurveda, Jyotish and Astronomy Studies, Vedic Studies, Literature Education etc.
- c. Market leader in Handloom and Handicraft products:
  - It has dominating position in manufacturing of India's potential export products such as handloom, Handwoven, Handicraft including carpets.
  - High quality manpower availability with presence of renowned Banaras Hindu University, Indian Institute of Carpet Technology and Sampoornan and Sanskrit Vishwavidalaya (University) oldest Sanskrit University in the country among may other educational institutes.
- d. Connectivity:
  - Varanasi is well connected at regional, national and international level with Lal Bahadur Shastri International Airport, three national highways i.e. NH-2, NH-56 and NH-29 and four state highways i.e. SH-87, SH-73, SH-74 and SH-98 and three major railway stations, viz. Varanasi Cantonment station, Varanasi City Railway Station and Mughalsarai Railway Station.

#### Analysis of Weakness

- a. The project is currently under completion stage and is on schedule with Tata Projects Ltd. ensuring the timely delivery.
- b. The convention activities in Varanasi is at a nascent stage, however, due to lack of such facilities, the sector is not fully captured yet.

#### Analysis of Opportunities

- a. Business Development Opportunities
  - Facility is being developed as an integrated marketing platform with one of the largest capacity Convention centers in the region.
  - Immense potential for tapping of nascent markets of conventions, exhibitions, business meets and conferences etc.
  - Varanasi region is market leader in Handloom and Handicraft products
- b. Tourism, Heritage and Pilgrimage
  - Immense potential for both International and Domestic tourism. Integrated tourism may be developed for religious tourism sector.
  - Better networking of tourist locations such as Ghats, temples and hotels/dharmasalas and other facilities.

#### Analysis of Threats

• This is a new project, hence, will initially require intense marketing and promotional activities to attract footfalls.

## C. Selection of Concessionaire for Operation and Management of TFC

In order to manage diverse activities at TFC such as promotions, marketing, facility management, facilitating leasing, etc. in a professional and sustainable manner, Ministry of Textiles, Govt. of India, through NHDC (hereinafter 'Authority'), envisaged to appoint an Agency under single concessionaire agreement (hereinafter 'Concessionaire Agency') for a comprehensive management and operation of TFC, Varanasi. Crafts Museum is being handled separately by NBCC, hence, it is excluded from this scope.

1.	Name of Project	Development of Trade Facilitation Centre & Crafts Museum at Varanasi.			
2.	Owner	Ministry of Textiles Govt. of India.			
3.	Implementing-agency	National Handloom Development Corporation Ltd.(NHDC)			
4.	Proposed Completion Date	ugust, 2017.			
5.	Site Area/Location	7.93 Acres land near Kendranchal Colony at Bada Lalpur, Varanasi.			
6.	Construction Agency	Tata Projects Limited			
7.	Indicative Scope of Work of Concessionaire Agency	For entire TFC (except Crafts Museum <sup>#</sup> ) undertake following, after it is handed over to Concessionaire Agency for management:			
		<ul> <li>i. Undertake Marketing and Promotion of TFC and all services associated with it,</li> <li>ii. Undertake temporary fit-outs necessary as per business strategy of the Concessionaire Agency,</li> <li>iii. Facilitate leasing of shops, marts, restaurants, food court, ATM's etc. Lease agreement will be signed directly with Authority and rental payments to be passed on to the Concessionaire Agency.</li> <li>iv. Organize cultural events in open spaces keeping the local sensitivities in view,</li> <li>v. Managing front-desk/help-desk for the facility, maintenance of visitor register, collection of rents, dormitory and guest room bed rents, exhibition facility rents, convention hall rents, venue and parking charges (if any) etc.</li> <li>vi. Facility Management and Operation, housekeeping, Security, Parking, Horticulture and Technical services, day-to-day repair and maintenance of the entire project, procurement of AMCs in the name of Authority. All expenses involved in such activities shall be borne by the concessionaire for entire Contract period.</li> <li>vii. The Operator will make payment for electricity and water bills for the entire TFC &amp; CM campus except for Museum building.</li> <li>viii. Coordination with Central, State and Local Government for National and International events at TFC</li> </ul>			
8.	Obligations of the Authority	<ul> <li>i. All capital investments/replacements for central services (like lifts, escalators, etc.) to be made by Authority,</li> <li>ii. Designated representative of the Authority shall have power to inspect TFC and its services at any reasonable time</li> <li>iii. Vetting of EoIs and agreements prior to finalization or publication.</li> </ul>			

Various terms of concessionaire selection are mentioned in table below:

<sup>&</sup>lt;sup>#</sup> A separate agency is being appointed for management and operation of Crafts Museum for a duration of 3 years, post which MOT may decide to float a fresh RFP for the same.

		iv. Set-up a Project Committee					
9.	Project Monitoring Committee	<ul> <li>i. A Project Committee will be formed by the Authority in order to monitor the activities at TFC, review any issues/concerns and undertake following activities:         <ul> <li>a. Supervise, monitor and control the activities and agencies engaged for TFC&amp;CM.</li> <li>b. Ensure that activities are aligned with the objectives of TFC&amp;CM.</li> <li>c. Scrutinize and approve Eol's and agreements for procurement and leasing undertaken by the Concessionaire Agency.</li> <li>d. Provide local level support and coordination to Authority.</li> <li>ii. Project committee will conduce review meetings on quarterly basis at TFC,</li> <li>iii. If any matter is not resolved within 30 days, Concessionaire Agency can escalate it to designated officer at the supervise of the activities and agency is a supervise.</li> </ul> </li> </ul>					
10.	Fixed Parameters	<b>Tenure:</b> Management and Operation agreement will be for <b>Events:</b> Authority shall have exclusive right to reserve utility ear for events by their representative organizations at fol	lization of Convention/Exhibition facility up-to 100 days in a				
		Location	Amount (INR per day) exclusive of taxes				
		Convention Hall	1,00,000 /-				
		Covered Exhibition Spaces	50.000 /-				
		Open Exhibition Spaces	30,000 /-				
		Meeting Rooms and Business Centre (if required)	Free of cost during events and meetings only				
		AC Guest Rooms	1,000/- per Guest Room				
		92 beds in dormitory	Free of cost during events and meetings only				
		<ul> <li>Concessionaire Agency of any proposed events at least 9</li> <li>Leasing: <ul> <li>Lease agreement of all spaces will be signed direct facilitate the leasing activity.</li> </ul> </li> </ul>	ulating its Annual Calendar of events. Authority shall notify the 00 days in advance. Iy with Authority only. The Concessionaire Agency shall only ty is mandatory on all leasing/sub-leasing of spaces by the				
		<ul> <li>appointed Concessionaire Agency</li> <li>a. Shops and Marts         <ul> <li>i. All Shops &amp; Marts can only be leased for sale / trade in Handloom, Handicraft &amp; Carpets catego be given to the applicants from Varanasi and adjoining districts,</li> </ul> </li> </ul>					

**x** These are indicative rates and subject to change at RFP stage.

11.	Banned list	<ul> <li>ii. Each category (Handloom, Handicraft &amp; Carpets) shall get minimum 3 Shops and 10 Marts to give adequate opportunity for all three sectors.</li> <li>iii. Shops and Marts shall be leased for a minimum of 3 years and maximum up to 9 years.</li> <li>b. Kiosks <ul> <li>i. Leasing/allotment of Kiosks shall be done directly by the Authority with no charges payable to Concessionaire Agency.</li> <li>ii. In case if Kiosk spaces are vacant, the Concessionaire Agency may allot such spaces post approval from the Authority.</li> <li>iii. Concessionaire Agency shall manage &amp; maintain the Kiosk spaces.</li> </ul> </li> <li>c. Food court <ul> <li>i. At least 6 (out of 9) food kiosks shall offer authentic local and traditional cuisines of Varanasi region.</li> </ul> </li> <li>d. Dormitories and Guest Houses <ul> <li>i. National Center for Trade Information and office spaces as defined in the layout shall be provided free of cost to government agencies facilitating trade &amp; export procedures.</li> </ul> </li> <li>a. Any product/Service, sale of which is unlawful/illegal or deemed unlawful under any Indian act or legislation.</li> <li>b. Any product, storage and sale of which may lead to or be considered as a fire hazard; such as fire crackers, industrial explosives, chemicals tec.</li> </ul>		
		<ul> <li>c. Sale of open liquor and alcohol based drinks or beverages.</li> <li>d. Sale of tobacco and tobacco products.</li> <li>e. Defacement of the building structure or facade or boundary.</li> <li>f. The use of loud speakers, musical instruments and band etc. without requisite permissions/approvals from concerned/ Competent Authority.</li> </ul>		
12.	Variable Parameter		v the Applicant to be paid to the Authority, above base value of INR (1) One Crore.         Annual Premium to be paid by Concessionaire Agency:         Annual Escalation factor         No escalation         15% on quoted Annual Premium         30% on guoted Annual Premium	
13.	Selection Process	The Annual Premium shall be paid in INR proportionately on monthly basis, within (10) ten days from end of particular month. Reconciliation of payments, dues, refunds, adjustments will be done on quarterly basis.		
		•	I) by the prospective applicants and Pre-bid Conference	

		<ul> <li>2. Request for Proposal (RFP) – <ul> <li>a. Technical Proposal including Presentation (ranking of pre-qualified applicants as per scoring criteria in RFP)</li> <li>b. Financial Proposal of top 3 ranked applicants will be evaluated</li> <li>3. Applicant quoting highest Annual Premium among top 3 ranking applicants to be selected as successful bidder.</li> <li>4. Bid validity will be 180 days from proposal due date</li> </ul> </li> <li>Note: Authority reserves the right, without any obligation or liability, to accept or reject any or all applications, at any stage of the selection process, to cancel or modify the process or any part thereof, or to vary any or all the terms and conditions at any time, without assigning any reason whatsoever.</li> </ul>
14.	Selection Criteria	<ul> <li>Pre-qualification criteria for bidders:</li> <li>1. Registered company in India; with min. 3-year experience in hospitality / MICE (Meeting, Incentives, Conference, Exhibitions/ Events) sectors (Attach true copy of registration certificate);</li> <li>2. Sole bidder or Lead member shall have experience of successfully executing min. one (01) assignment/facility including its management, marketing and promotions in hospitality/ convention center/ trade fair/ MICE facility for min. for at least one (01) year (as on date of issue of RFP) and covering at least 10,000 sqm area (Attach true copy of supporting work order, completion certificate as applicable);</li> <li>3. Sole bidder or consortium shall have experience of executing min. one (01) assignment/facility including its operations and facility management in hospitality/ convention center/ trade fair/ MICE facility for min. for one (01) year (as on date of issue of RFP) and covering at least 10,000 sqm area (Attach true copy of supporting work order, completion certificate as applicable);</li> <li>3. Sole bidder or consortium shall have experience of executing min. one (01) assignment/facility including its operations and facility management in hospitality/ convention center/ trade fair/ MICE facility for min. for one (01) year (as on date of issue of RFP) and covering at least 10,000 sqm area (Attach true copy of supporting work order, completion certificate as applicable).</li> <li>4. Sole bidder or Lead member with aggregate average turnover of not less than Rs.10 crores &amp; a net worth of not less than Rs. 3 crores for last three financial years (2013-14,2014-15 &amp; 2015-16) (Attach supporting Auditor's /CA certificate). Lead member to maintain min. 51% stake in consortium and shall be liable to the Employer for every aspect of their proposal, contract etc. (Attach consortium agreement)</li> <li>5. Bidders should have earned profits in following three financial years (2013-14,2014-15 &amp; 2015-16).</li> </ul>
15.	Security Deposits	<ul> <li>Bid Security: INR 1,00,000 (Rupees One Lakh) in the form of Demand Draft at RFP stage by all bidders</li> <li>Performance Security: INR 1,00,000 (Rupees One crore) by way of Bank Guarantee by successful bidder at agreement signing</li> <li>Asset Security: INR 5,00,00,000 (Rupees Five crore) by way of Bank Guarantee by successful bidder at agreement signing. If any loss incurs during tenure, to any movable/immovable properties of the TFC, cost of same will be borne by Concessionaire Agency. In case Concessionaire Agency does not rectify damages, same shall be recovered from Asset Security deposited by Concessionaire Agency.</li> </ul>
16.	Exit Clauses (Draft)	<b>Note: -</b> Below are some of the major preliminary clauses; final clauses will form part of draft agreement as annexure to RFP document to be released later.

Termination for Concessionaire Defaults
<ul> <li>If the Security deposit has been encashed and not replenish or fresh Security deposit not provided within a period of 90 (ninety) days;</li> <li>subsequent to the replenishment or submission of fresh Security deposit, the Concessionaire fails to cure default within a period of 90 (ninety) days, for which whole or part of Security deposit was appropriated</li> <li>the Concessionaire abandons the operation of the Project without the prior written consent of the Authority for more than 120 (one hundred twenty) days;</li> <li>in case of repetitive significant performance failures not attended by Concessionaire or there are major defaults by the Concessionaire,</li> <li>the Concessionaire has failed to make any payment due to the Authority within the 90 days of due date or period specified in Agreement</li> <li>the Concessionaire creates any Encumbrance in breach of the Agreement or there is a change in Ownership in breach of the Agreement</li> </ul>
Termination for Authority Default
• If the Authority fails to transfer / pay / reimburse / adjust payments within 90 days or period specified in Agreement, from due date of such payments as the case may be, for which Concessionaire is entitled as per the terms of Agreement, such as lease rents received by Authority from shops/marts, payments for events organized by Authority etc.
<ul> <li>Review and dispute resolution</li> <li>A Project Committee will be formed by the Authority in order to monitor the activities at TFC and review any issues/concerns.</li> <li>Project committee will conduce review meetings on quarterly basis at TFC,</li> <li>Committee may appoint an independent engineer for inspections and reporting at regular intervals,</li> <li>If any matter is not resolved within 30 days by the Project Committee, the Concessionaire / Committee can escalate the matter to a designated officer at Ministry of Textiles, Govt. of India.</li> </ul>

## Annexure 1: Detailed Project Description xi:

The Trade facilitation and Crafts Museum is mainly comprised of five blocks as detailed below:

## *i.* BLOCK 1: MARTS CUM OFFICE BLOCK:

G+3 structure, having total built-up area of 6,050 sq. mt (excluding basements). Ground Floor

The ground floor of the block consists of Marts (11 Nos) and a large central courtyard capable of hosting events and exhibitions.

Description	Total Units	Total Units Unit Size (mm)		
	3	3735 x 8185		
Mart	1	3935 x 8185		
	1	3905 x 8185		
	6	3920 x 8185		

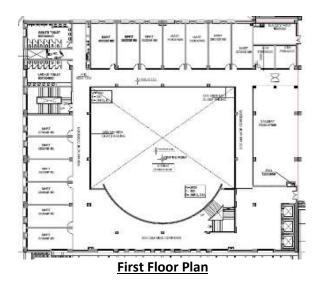


**Ground Floor Plan** 

## First Floor

The first floor of the block consists of Marts (13 Nos), 2 ATM blocks and exhibition gallery capable of hosting events and exhibitions.

Description	Total Units	Unit Size (mm)
	3	3735 x 8185
	1	3935 x 8185
Mart	1	3905 x 8185
	7	3920 x 8185
	1	4655 x 8185
ATM	2	3780 x 4220
Gallery	1	7535 x 17955



xi **Source**: Data provided by project Architect SIKKA Associates Architects and Project Management Service Provider NBCC Ltd.

## Second Floor

The second floor of the block consists of Marts (15 Nos) and business center capable of organizing meetings and conferences.

Description	Total Units	Unit Size (mm)
	3	3735 x 8185
	1	3935 x 8185
Mart	1	3905 x 8185
Walt	7	3920 x 8185
	1	4655 x 8185
	2	3780 x 4220
Business center	1	7905 x 17955

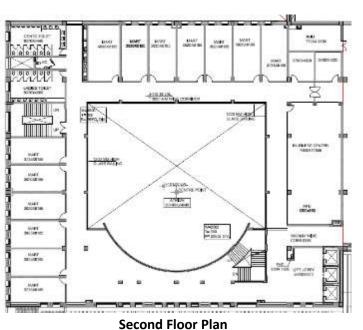
#### **Third Floor**

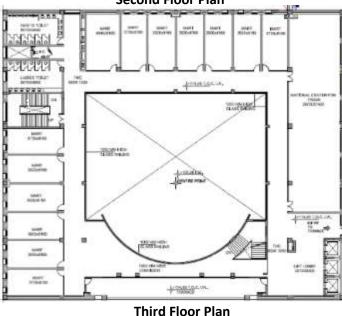
The third floor of the block consists of Marts (13 Nos and National Centre for Trade Information.

Description	Total Units	Unit Size (mm)
	3	3735 x 8185
	1	3935 x 8185
Mart	1	3905 x 8185
	7	3920 x 8185
	1	4840 x 8185
National Centre for Trade Information	1	28720 x 7420

## **Facilities Available**

- Marts shall be provided as warm shell facility with all basic amenities installed such as flooring, false ceiling, partitions, ambient lighting, central air-conditioning etc. as per the design guidelines for the facility.
- All core services such as electrical, fire alarm, fire-fighting, air-conditioning, plumbing, power backup etc.
- Business center and National Centre for Trade Information Office shall be provided as warm shell facility with all basic amenities installed along with office furniture.
- Lift lobby with 3 passenger elevators.





- Public amenities for gents, ladies and physically handicapped.
- Common areas are non-air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.

LOCATION	DETAILS OF FINISHES AND INSTALLATIONS				
	FLOOR	CEILING	WALLS	FURNITURE	
Marts	Vitrified Tiles	Metal Clip in ceiling	Emulsion Painting	-	
Business center	Vitrified Tiles	Acoustical Tile Flooring	Emulsion Painting	Including furniture	
National Centre for Trade Information	Vitrified Tiles	Acoustical Tile Flooring	Emulsion Painting	Including furniture	
ATM	Vitrified Tiles	Clip in Tile	Emulsion Painting	-	
Common Area	Sand Stone Flooring	Gypsum Board False ceiling	Emulsion Painting	-	
Open Courtyard	Stone Flooring	-	-	Planters and inbuilt seating's	

## ii. BLOCK 2: CONVENTION CUM EXHIBITION HALL:

G+2 structure, having total built-up area of 7560sq. mt (excluding basements).

## **Ground Floor**

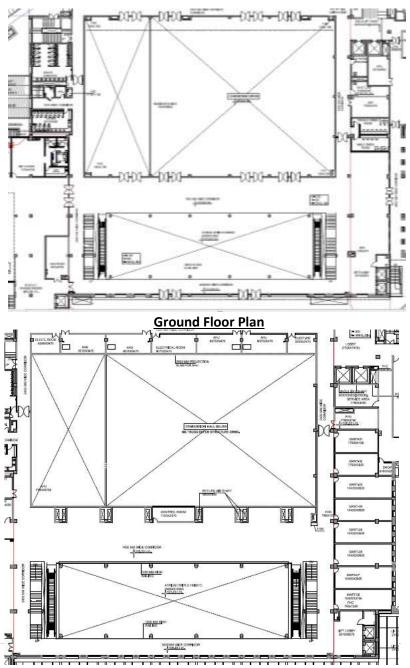
The ground floor of the block consists of triple heighted state of the art **convention center sizing 52 M x 33 M** and is one of the largest capacity convention center presently available in the region. The convention hall is accompanied with VIP lounge, green room for both male and female participants along with adequate public amenities. The triple heighted atrium provides a grand entrance to the block and capable of hosting events and exhibitions.

First Floor consists of Marts (8 Nos) along with Exhibition Gallery.

Description	Total Units	Unit Size (mm)
	1	10420 x 3735
Mart	5	10420 x 3920
Walt	1	7790 x 3920
	1	7790 x 4105

Second Floor consists of Marts (4 Nos) along with Exhibition Gallery.

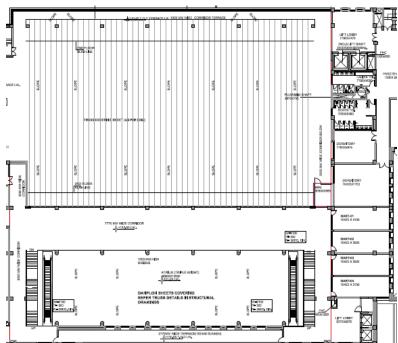
Description	Total Units	Unit Size (mm)
	1	10420 x 3735
Mart	2	10420 x 3920
	1	10420 x 4105



**First Floor Plan** 

## **Facilities Available**

- Convention Hall shall be provided as warm shell facility with flooring, false ceiling, acoustical door, electrical fixtures, central air-conditioning, speakers etc. as per the design guidelines for the facility. Only connectivity facilities are provided for future Audio Visual connectivity.
- Convention hall shall be provided with approx. 600 collapsible/retractable theater a style seating.
- VIP lounge shall be provided with toilet, pantry and restroom with flooring, false ceiling, partitions, ambient lighting, central air-conditioning, sanitary fittings etc.
- Marts shall be provided as warm shell facility with flooring, false ceiling, aluminum glazed door, electrical fixtures, central air-conditioning, power points, telephone and data points etc. as per the design guidelines for the facility.
- Common areas are air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.
- Public amenities are provided for gents, ladies and physically handicapped.
- Lift lobby with 2 passenger elevators.
- All core services such as electrical, fire detection and fire-fighting, PA system, airconditioning, plumbing, power backup etc.
- 2 sets of escalators between ground and first floor.



#### Second Floor Plan

LOCATION	DETAILS OF FINISHES AND INSTALLATIONS				
	FLOOR	CEILING	WALLS	FURNITURE	
Convention Hall	Granite Flooring	Gypsum False Ceiling	Acoustic Wall Paneling	Retractable Seating	
VIP Lounge/ Pantry/ Toilet	Vitrified Tile	Gypsum Board	Wall paper / Tiles	Including furniture, TV etc.	
Green Rooms	Vitrified tile	Not Available	Emulsion Painting	-	
Atrium Space	Sand Stone Flooring	No False ceiling	Stone Cladding	-	
Exhibition Areas	Vitrified Tiles	Gypsum	Painting	-	
Marts	Vitrified Tiles	Clip in metal	Painting	-	

iii. BLOCK 3: FOOD COURT CUM GUEST HOUSE:

G+3 structure, having total built-up area of 7470sq. mt (excluding basements).

#### Ground Floor

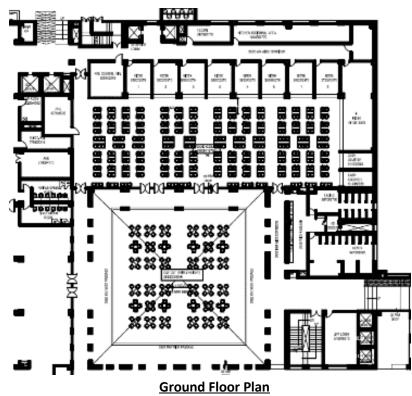
The ground floor of the block consists of food court with both indoor and outdoor seating spaces. The courtyard space has been envisaged to be converted to form exhibition space or area for other activities as per requirement. The floor comprises of the following components

Description	Total Units	Unit Size (mm)
Kiosk1	7	3920 x 5570
Kiosk2	1	3735 x 5570
Kiosk3	1	4910 x 13640
Cash Counter	2	5140 x 2585
Kitchen Addition Area	1	18045 x 2770
Indoor AC seating area	1	40900 x 13700
Outdoor Seating area	1	26600 x 26970

#### **Facilities Available**

- Food Kiosks shall be provided as warm shell facility only with flooring, false ceiling, partitions, ambient lighting, central air-conditioning, exhaust system etc.
- Indoor seating space is air conditioned and complete with all basic amenities installed. Courtyard seating is non air-conditioned.
- Seating furniture for indoor and outdoor courtyard seating space.
- Interesting lighting fixtures to adequately illuminate the courtyard.
- All core services such as electrical, fire alarm, fire-fighting, air-conditioning, plumbing, power backup etc.
- Two service lifts are provided at the service core along with staircase.
- Public amenities for gents, ladies and physically handicapped.
- Lift lobby with 2 passenger elevators and staircase.

LOCATION	DETAILS OF FINISHES AND INSTALLATIONS				
	FLOOR CEILING WALLS FURNITURE				
Food Kiosks	Tile Flooring	Clip in Metal Tile	Emulsion Painting	Counter with Corian Finish	
Cash Counter	Tile Flooring	Clip in Metal Tiles	Emulsion Painting	Counter with Corian Finish	
Kitchen Addition Area	Tile Flooring	Clip in Metal Tile	Emulsion Painting	Services points only	



Indoor AC seating area	Tile Flooring	Baffle Ceiling	Emulsion Painting	Including chairs and tables
Out Door/ Courtyard seating area	Stone Flooring	-	-	Including chairs and tables
Common Area	Tile / Stone Flooring	Gypsum Ceiling	Emulsion Painting	-

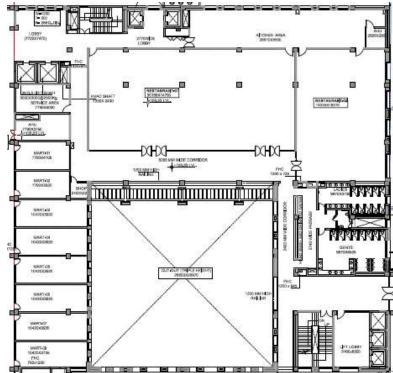
## **First Floor**

First floor consists of restaurants as detailed below

Description	Total Units	Unit Size (mm)
Restaurant 1	1	30155 x 14790
Restaurant 2	1	13025 x 19270
Kitchen Space	1	28610 X 5500
Shop	1	2400 x 2255

## **Facilities Available**

- Restaurants and kitchen space shall be provided as bare shell facility only.
- No furniture, false ceiling or floor finishing are provided for the restaurants.
- Common areas are non-air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.
- Only main tap off points for all core services such as electrical, fire alarm, firefighting, air-conditioning, water supply and drainage, power backup etc. provided.
- Two service lifts are provided at the service core along with staircase.
- Public amenities for gents, ladies and physically handicapped.
- Lift lobby with 2 passenger elevators and fire staircase.
- All core services such as electrical, fire alarm, fire-fighting, air-conditioning, plumbing, power backup etc.



LOCATION	DETAILS OF FINISHES AND INSTALLATIONS			
	FLOOR	CEILING	WALLS	FURNITURE
Restaurants	CC Flooring	No False Ceiling	Emulsion Painting	-
Kitchen	Tile Flooring	Gypsum Board Ceiling	Emulsion Painting	Services points only
Shop	Tile Flooring	Gypsum Board False Ceiling	Emulsion Painting	-
Common Area	Stone / Tile Flooring	Gypsum Board False ceiling	Emulsion Painting	-

#### **Second Floor**

Second Floor consists of dormitories and an office space as detailed below:

Description	Total Units	Unit Size (mm)	Beds
Dormitory (Type 1)	1	10420 x 7700	10 Nos
Dormitory (Type 2)	1	7790 x 5875	6 Nos
Dormitory (Type 3)	2	5255 x 8785	5 Nos Each
Dormitory (Type 4)	4	3920 x 8785	5 Nos Each
Dormitory (Type 5)	2	8220 x 3920	4 Nos Each
Dormitory (Type 6)	1	8220 x 4970	4 Nos
Dormitory (Type 7)	1	10485 x 5685	6 Nos
Dormitory (Type 8)	1	5560 x 11070	6 Nos
Dormitory (Type 9)	1	3905 x 11070	6 Nos
Dormitory (Type 10)	1	4105 x 11070	5 Nos
Office	1	6340 x 11770	-



## **Facilities Available**

Dormitories shall be provided as warm shell facility with all basic amenities installed such as flooring, false ceiling, partitions, ambient lighting, central air-conditioning, power points etc. as per the design guidelines for the facility.

- 81 single occupancy beds and lockers shall be provided for dormitories.
- All other requirements such as beddings, drapes, television unit etc. in rooms shall not be provided by the Authority.
- Waiting lounge shall be provided with furniture and television unit.
- Offices shall be provided as warm shell only.
- Common areas are non-air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.
- Two service lifts and staircase are provided at the service core.
- 2 sets of public utility facility for gents, ladies and physically handicapped for convenient approach from dormitories.
- 2 Lift lobbies with 2 passenger elevators each and one staircase.
- All core services such as electrical, fire alarm, fire-fighting, air-conditioning, plumbing, power backup etc.

LOCATION		DETAILS OF FINISHES AND INSTALLATIONS			
	FLOOR	FLOOR CEILING WALLS FURNITURE			
Dormitories	Vitrified Tile Flooring	Gypsum False Ceiling	Emulsion Painting	Beds, Storage	
Office	Vitrified Tile Flooring	Gypsum False Ceiling	Emulsion Painting	-	
Common Area	Stone Flooring	Gypsum False Ceiling	Emulsion Painting	Furniture, TV etc.	

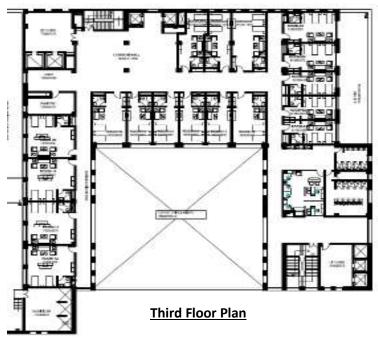
#### Second Floor Plan

#### **Third Floor**

Third Floor consists of total 18 double occupancy guest rooms with attached toilets and an office space.

#### **Facilities Available**

- Guest Rooms shall be provided as warm shell facility with all basic amenities installed such as flooring, false ceiling, partitions, ambient lighting, central air-conditioning, sanitary fittings, power points, telephone and data points etc. as per the design guidelines for the facility.
- Double occupancy beds and lockers shall be provided for each guest rooms.
- All other requirements such as beddings, drapes, television unit etc. shall not be provided by the Authority.
- Common Hall shall be finished with furniture and point for television unit.
- Offices shall be provided as warm shell facility.
- Common areas are non-air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.
- Two service lifts are provided at the service corridor along with fire staircase.
- 2 sets of public utility facility for gents, ladies and physically handicapped.
- 2 Lift lobbies with 2 passenger elevators each and one fire staircase.
- All core services such as electrical, fire alarm, fire-fighting, air-conditioning, plumbing, power backup etc.



LOCATION DETAILS OF FI			AND INSTALLATIONS	
200/1101	FLOOR	CEILING	WALLS	FURNITURE
Guest Rooms	Vitrified Tile Flooring	Gypsum False Ceiling	Emulsion Painting	Beds, Storage
Office	Vitrified Tile Flooring	Gypsum False Ceiling	Emulsion Painting	-
Common Area	Sand Stone Flooring	Gypsum False Ceiling / Acoustic Tile	Emulsion Painting	-

#### iv. BLOCK 4: SHOPING ARCADE

#### G+1 structure having total built-up area of 2,300 sq. mt.

Shopping Arcade has a total of <u>**28 Shops**</u>, located on Ground and First floor levels, having aa area of about 320 Sq. ft.

## **Facilities Available**

- Shops shall be provided as warm shell facility with flooring, false ceiling, aluminum glazed door and windows, electrical fixtures, central air-conditioning, power points, telephone and data points, power backup etc.
- Common areas are non-air conditioned and finished with flooring, false ceiling, ambient lighting, firefighting, systems, PA system etc.
- 2 passenger lifts are installed along with fire staircase.
- Arrival court is completed with required installations.
- Space for installation of tensile structures for Kiosks, lighting, paved area along with landscape is provided on the ground floor between shop units.

The leasing/allotment of Kiosks shall be done directly by the Authority.

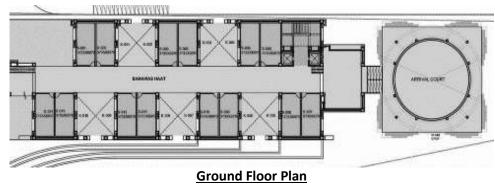




Figure 6: Floor Plan for Shopping Arcade

LOCATION		DETAILS OF FINISHES AND INSTALLATIONS			
	FLOOR	CEILING	WALLS	FURNITURE	
Shops (G.F and F.F)	Vitrified Tiles	Clip in metal Ceiling	Emulsion painting	-	
Enquiry Counter (GF)	Stone Flooring	Loop Ceiling	Emulsion painting	Enquiry counter	
Waiting Lounge (FF)	Stone Flooring	Loop Ceiling	Emulsion painting	Furniture, TV etc.	
Common Area	Stone Flooring	Gypsum False Ceiling	Emulsion painting	-	

#### v. BLOCK 5: CRAFTS MUSEUM

The Museum block, a G+2 structure having total built-up area of 3950 sq. mt. Presently a separate agency is being selected for design, build, maintain and operate the Crafts Museum.

It is envisaged to create a story-driven and engaging experience for visitors, the museum and the exhibition gallery includes provision for display of textiles, carpets and handicrafts in an engaging environment.

**Amphitheater**: The open air theatre surrounded by the arms of the Museum Block has been designed to accommodate 250 to 300 guests and shall host multiple cultural events and light and sound shows.



## vi. BUILDING INFRASTRUCTURE AVAILABLE xii

### 1. DETAILS OF WATER TANKS

OVERHEAD TANKS					
Fire	Office	Convention	Food	Shop	Museum
	10,000 L	10,000 L	10,000 L	10,000 L	10,000 L
Domestic	9,000 L	14,000 L	32,000 L	-	9,500 L
Flushing	6,000 L	9,000 L	3,000 L	-	6,500 L
HVAC (Water tank)	35,000 L	-	-	-	-
UNDER GROUND TANKS					
Number of tanks (Raw / Domestic / Fire)	1,10,000 L (Raw Water	1,10,000 L (Raw Water Tank)			
Capacity	1,10,000 L (Treated Wa	1,10,000 L (Treated Water Tank)			
	1,00,000 L X 2 ( Fire Tank ) = 2,00,000 L				

## 2. DETAILS OF LIFTS AND STAIRCASES

DESCRIPTION	QUANTITY	FINISHING / SPECIFICATIONS
Staircases in the building	11	Chunar sand stone
Lifts	11 LIFTS (16 PAX EACH)	Supplier: Mitsubishi
Good lift	02 Lift ( 1600 Kg Each)	Supplier: Mitsubishi
Escalators	2 Nos	Supplier: Mitsubishi

#### 3. AIRCONDITIONING SYSTEM

DESCRIPTION	QUANTITY	FINISHING / SPECIFICATIONS
Air Conditioning	3 X 400 TR	Supplier: To be provided

## 4. ELECTRICAL INSTALLATION

DESCRIPTION	DETAILS
Number of DG sets:	3 + 1
KVA Rating:	3 x 1500 KVA + 1 x 500 KVA
Installed Load:	5000 KVA
Number of Transformers:	3 Nos.

xii **Source**: Data provided by project Architect SIKKA Associates Architects and Project Management Service Provider NBCC Ltd.

Capacity and Rating:	1600 KVA, 33KV / 433 volt Dry type
Number of HT Panels:	2
Capacity and Rating:	33 KV, 1500 MVA, 1 No. i/c + O/G, 1 No. i/c +
	3 O/G
Number of LT Panels:	70
Capacity and Rating:	As per schematic
Number of UPS	1 x 160 KVA

## 5. EPBAX SYSTEM

DESCRIPTION	DETAILS
Suppliers Name:	UNIFY
Give brief description	IP Based

## 6. FIRE PROTECTION SYSTEM

DESCRIPTION	DETAILS
Wet Risers (Yes / No)	Yes
Sprinklers (Yes / No)	Yes
Gas Suppression System (Yes/No)	No
Portable Extinguishers Yes / No.	Yes

## 7. FIRE ALARM SYSTEM

DESCRIPTION	DETAILS
Suppliers Name:	Edward (Addressable System)
No of Smoke detectors	2076 Nos.

### 8. BUILDING AUTOMATION SYSTEM

DESCRIPTION	DETAILS
Suppliers Name:	Schneider
Give brief description:	Covers HVAC, DG Set, Monitoring & Power Supply

## 9. ACCESS CONTROL SYSTEM: NA

## 10. CCTV SYSTEM

DESCRIPTION	DETAILS
Suppliers Name:	Pelco
No of Dome camera	120
No. of IR Bullet Camera	54
Nos. of PTZ Camera	40
No of Monitors / Multiplexers	12
Recording Mechanism	DVR

## 11. LANDSCAPING AND GARDENING

DESCRIPTION	DETAILS
Area of the Lawn/Garden:	16000 Sq. m
Any Fountains /Water Bodies present? If so mention the number	2 Nos – (35 Sq. m and 60 Sq. m)
Potted Plants Required for interiors and outside?	Yes

## vii. DESCRIPTION OF AVAILABLE FURNITURE xiii

S No	Description	Size	Qty
		Food Court & Dinning	
1	Café Table-1	750mm x 750mm x 750mm	11
2	Café Table-2	1200mm x 750mm x 750mm	68
3	Café Table-3	1800mm x 750mm x 750mm	15
4	Café Chair Indoor	-	328
		Office Furniture	
1	Workstation-1	1200mm x 1650mm x 1200mm	17
2	Workstation-2	1200mm x 1500mm x 1200mm	27
3	Workstation-3	3200mm x 2700mm x 1200mm	5
4	Workstation-4	3200mm x 2700mm x 1200mm	3
5	Workstation Chair	-	39
6	Manager Chair	-	8
7	Office Visitor Chair	-	16
8	Executive Table with Side Unit	MD-2200mm x 1190mm x 750mm	2
		ERU-1380mm x 480mm x 700mm	
		Pedestal- 406mm x 550mm x 640mm	
9	Executive Back Unit	2410mm x 425mm x 1215mm	2
10	Executive Main Chair	-	2
11	Executive Visitor Chair	-	6
12	Discussion Table -1	1500mm X 600mm X 750mm	3
13	Discussion Table -2	1350mm X 600mm X 750mm	2
14	Discussion Chair	-	24
15	Sofa 3 Seater	-	2
16	Sofa 2 Seater (For VIP Lounge)	-	6
17	Sofa 1 Seater	-	13
18	Side Table	500mm x 500mm x 428mm	14

xiii **Source**: Data provided by project Architect SIKKA Associates Architects and Project Management Service Provider NBCC Ltd.

19	Center Table	1000mm x 600mm x 428mm	7
20	Reception Table-1	2100mm x 900mm x1050mm	2
21	Reception Table-2	4500mm x 900mm x 1050mm	3
22	Green Room Counter	6000mm X 600mm X 750mm	2
23	Green Room Drawer	Metal Pedestal: 450mm X 435mm X 646mm	8
24	Green Room Chair	Bar Stool	12
25	Office Storages	2100mm x 450mm x 1219mm	7
		Dormitory & Guest Houses	
1	Double Bed (Ante Room)	2180mm x 1880mm x 940mm	1
2	Single Bed	2080mm x 960mm x 870mm	117
3	Bed Side Table -1	420mm x 450mm x 450mm	236
4	Sofa 3 Seater	-	12
5	Sofa 2 Seater	-	6
6	Sofa 1 Seater	-	30
7	Side Table	500mm x 500mm x 428mm	36
8	Center Table	1000mm x 600mm x 428mm	18
9	Console Storages	800mm x 500mm x 1295mm	12
10	Wardrobe	900mm x 500mm x 2013mm	135
11	Luggage Rack	946mm x 598mm x 1941mm	18
12	Console for TV	1800mm x 400mm x 400mm	4
13	Easy Chair for Ante Room	-	1

## Annexure 2: Comprehensive detail of infrastructure available at TFC&CM: xiv

Below table provides only an indicative understanding of the infrastructure available at TFC&CM, Varanasi and is non-exhaustive:

.No.	Description	QTY	Unit
	Lighting details		
	Cat No. Phillips : Green Spot Gen-II-DN311B LED12S-3000 PSU MB WH-Set of 3- down lighter	76	Nos.
	Green Spot Gen-II-DN311B LED12S-3000 PSU MB WH-Set of 1- Down lighter	545	Nos.
	Green Perform-DN 393BDownlighter- Dimmable	228	Nos.
	Green Perform-DN 393B Down lighter 3000K	1458	Nos.
	Green Perform-DN 393B Down lighter 6500 K	66	Nos.
	Philips Eco Accent- Track light ( 2000 lm)	226	Nos.
	Main Streem Spot 15 W Square surface mounted down lighter	832	Nos.
	FXC 101 - Bulk Head	207	Nos.
	Stellar Bright- tube light	517	Nos.
	SP310X LED Mirror Line light	123	Nos.
	RC311B LED Dalli dimmable light	115	Nos.
	Green Square Gen-II-RC140B 2 " X 2 " Light	709	Nos.
	Philips Maxolid-Auditorium Light	82	Nos.
	Philips CLARIA LED -Food court light	68	Nos.
	TCW450 2X19W- Tube light	345	Nos.
	LED bulk head	22	Nos.
	Green Perform-DN 393B Down lighter	134	Nos.
	Philips Eco Accent-Track Light ( 4000 lm)	198	Nos.
	Wipro Orbit light Museum- Dimmable	140	Nos.
	Landscaping		
	Drive over light- Philips	74	Nos.
	Bollard- Philips	17	Nos.
	step light- Philips	84	Nos.

xiv **Source**: Data provided by project Architect SIKKA Associates Architects and Project Management Service Provider NBCC Ltd.

tree uplighter- Philips	311	Nos.
pole light- Philips	47	Nos.
Studio mini-2745 6W LED- Wall recessed- K-lite	226	Nos.
Wall uplighter- K Lite	82	Nos.
Pergola light- K-Lite	104	Nos.
Façade lighting- Phillips	1	Lot
Ceiling fan- Usha	410	Nos.
LIFT- Mitsubishi		
16 passenger Lift		
Location:- office Block		
i) Speed- 1.5 m/sec		
ii) Floors- 6 No	3.0	Set
Location:- Convention Hall cum Exhibition Block		
i) Speed- 1.5 m/sec		
ii) Floors- 5 No	2.0	Set
Location:- Food Court Block (Grid BC/12-13)		
i) Speed- 1.5 m/sec		
ii) Floors- 6 No		
vii) Control – Duplex	2.0	Set
Location:- Food Court Block (Grid HI/17-18)		
i) Speed- 1.5 m/sec		
ii) Floors- 6 No		
vii) Control – Duplex	2.0	Set
Location:- Shopping Arcade Block		
i) Speed- 1.0m/sec		
ii) Floors- 2 No		
vii) Control – Duplex	2.0	Set
Location:- Museum Block		
i) Speed- 1.0m/sec		
ii) Floors- 3 No		
vii) Control – Duplex	2.0	Set

GOODS ELEVATOR		
1600 KG Goods Lift		
i) Speed- 1.0 m/sec		
ii) Floors- 6 No		
vii) Control – Simplex	2.0	Set
ESCALATORS- Mitsubishi		
Escalators - Up & Down Rise 5.0 m	2.0	Set
160 KVA UPS- Make- Numeric	1.0	Set
SOLAR PANEL SYSTEM of 10 KWp each- TATA BP SOLAR	10.0	Nos
Solar Water heater 125 ltr/day	2	Set
Transformer 1600 kVA- Make: VOLTAMP	3	
33 kV single panel HT VCB – Schneider	1	Set
33 kV three Panel HT VCB- Schneider	1	Set
MV Panel- Advance Panel, ADLEC	1	Lot
Bus Trunking 2500 Amp- C&S	331	Mtr.
Bus Trunking 1250 Amp- C&S	290	Mtr.
Bus Trunking 1000 Amp- C&S	97	Mtr
DG Set 1500 kVA Silent type DG set	3.0	Set
500 KVA Silent type DG set	1	set
CCTV		
Indoor dome cameras 2 megapixel CMOS 2 Megapixel Camera	145	Set

2 Megapixel WDR HD Network IR-Bullet Network Camera,	59	Set
PTZ Camera	40	Set
Network Attached storage system for CCTV system	12	Set
Computer	6	Set
40" LCD panel	12	Set
UTP-Racks, Rack accessories & Local Components and active device	1	Lot
EPABX- Make: UNIFY		
1 PRI Trunk lines (60 Ch) Circuit with CLIP Facility (PRI Connectivity to be provided by service provider)		
16 CO Trunk Lines		
350 Analog users with CLIP Facility		
40 IP Users with Licenses	1	Set
Telephone Instruments- Make: EURO SET	_	
Type 1 IP Telephone Instruments IP Telephone should be 2 Line Display with 2 port Integrated Ethernet Switch 10/100 Mbps .	30.0	Set
Type 2 IP Telephone Instruments - IP Telephone should be 6 Line Display with 2 port Integrated Ethernet Switch 10/100 Mbps .	10.0	Set
Type 1 Analog Telephone Instruments without Display, Pulse Tone Dialing etc.	174.0	Set
Type 2 Analog Telephone Instruments with CLIP facility Display Phone, Pulse Tone Dialing etc.	50.0	Set
Call Billing Software with Standard PC .	1.0	Set
42U Rack for EPABX System	1.0	Set
Fire alarm system- MAKE: EDWARD		
Addressable multi-sensor detector	2050.0	Nos.
Beam Detectors	4.0	Nos.
Addressable Manual Pull Station	61.0	Nos.
Addressable type fault isolator	91.0	Nos.
Addressable control modules for Fire Fighters Telephone circuit.	46.0	Nos.
Addressable control relay modules for AHU, Axial fans control & lift well Pressurization Fan etc.	150.0	Nos.
Addressable monitor modules for Sprinkler Flow Switch and Door Holders.	36.0	Nos.
Response indicator	1200.0	Nos.
Directional Sounders	61.0	Nos.
Addressable Strobe Lights Cum Hooter with 110 cd	61.0	Nos.
I digital voice evacuation 2 way Communication Fire Fighter Controller/System	1.0	Nos.
Digital Audio Amplifier	1.0	Nos.

Ceiling Mounted speakers	632.0	Nos.
Wall Mounted speakers	85.0	Nos.
2 way communication Fire Fighter's Telephone Jack	47.0	Nos.
2 way communication Fire Fighter's Telephone Handset	5.0	Nos.
Fire panel	1.0	Nos.
GUI based main network software,	1.0	Nos.
Network Repeater Panel with 6 inch or 640-characters display.	1.0	Nos.
Annunciate (Zone Selector)	1.0	Nos.
Networked Fire Fighters 19 inch Touch screen Graphical Display Mimic	1.0	Nos.
Fire damper control	60.0	Nos.
BMS- Schneider		
Central control workstation consisting of the CPU	1.0	Nos.
Building Management System software	1.0	Nos.
Integrators	1.0	Nos.
Standalone Intelligent UL listed 32bit DDC Controllers	1.0	Nos.
32 bit UL listed System Integration Units/ Supervisory Control Units	1.0	Nos.
hand held portable operator terminals.(POT) a	1.0	Nos.
Sensors :		
Duct type Temperature Sensor	56.0	Nos.
Outside air temperature & humidity sensors for measuring Ambient conditions	1.0	Nos.
Differential pressure switches across the Fans for indicating the air flow status.	43.0	Nos.
Bi- Level Switches for measuring water level in UG & OH Tanks	15.0	Nos.
Flame proof Bi-level switch for measuring fuel level in day oil tanks	5.0	Nos.
Water Pressure transmitters for measuring hydrant pressure.	1.0	Nos.
Voltage Transducer for measuring DG Battery Voltage status.	9.0	Nos.
Fire fighting		
Valves, Sprinklers etc.	1.0	Lot
Fire Extinguishers	1	Lot
Firefighting pumps		
Electric driven Hydrant Pump & Sprinkler pump		
Discharge - 2850 lpm		
Head - 70 m		
Type of pump - End suction	2.0	Set

	ter curtain pump		<u> </u>
Discharge	- 2850 lpm		
Head	- 40 m		
Type of pump	- End suction	1.0	set
Jockey Pump			
Discharge	- 300 lpm		
Head	- 70 m		
Type of pump	- End suction	2.0	set
Hydrant Pump s			
	of the following specifications:		
Discharge	- 2850 lpm		
Head	- 70 m		
Type of pump	- End Suction	1.0	set
	ater curtain Pump		
	of the following specifications:		
Discharge	- 2850 lpm		
Head	- 40 m		
Type of pump	- End Suction	1.0	set
Electrical Panel		1.0	Set
WTP Pumps			
Vertical in line type	pump		
Filter Feed pumps			
Pump capacity	- 250 lpm		
Head	- 30 m	3.0	Nos
Domestic water tra			
Pump capacity	- 500 lpm		
Head	- 40 m		
RPM	- 2900	3.0	Nos
Flushing water tran	sfer pumps		

Pump capacity - 400 lpm		
Head - 40 m		
RPM - 2900	2.0	Nos.
Softener Feed pumps		
Pump capacity - 350 lpm		
Head - 30 m		
RPM - 2900	2.0	Nos.
HVAC makeup water transfer pumps-		
Pump capacity - 650 lpm		
Head - 40 m		
RPM - 2900	2.0	Nos.
mono block submersible drainage pumps		
Capacity 300 lpm & Head 10 m (in basement)	14.0	Nos.
Capacity 500 lpm & Head 10 m (in pump room)	2.0	Nos.
STP- 200 KLD		
Manual Bar screen in SS-304 for 200m3/day at the inlet of receiving sump common for both modules.		NI
Size 1000 x 1000	1	Nos.
Sewage pumps: Centrifugal type, non clogself priming pumps Capacity 5m3/hr at 12m head	3	Nos.
	3	NOS.
Sludge pumps: Capacity 5m3/hr at 12m head	2	Nos.
Air Blowers:	2	NOS.
	2	Nos.
Capacity- 130m3/hr @ 6000 MMWG	3	INOS.
Filter Feed pumps:		
Capacity 12m3/hr at 30m head1 No.	3	Nos.
Filter press feed screw pumps	2	Nos.
Treated water pumps:		

Capacity 12m3/hr at 50m head - 1 working	2	Nos.
Filter Press	1	Nos.
Providing and fixing UV reactor	2	Nos.
Vertical, MSRL, filter:		
Capacity 12m3/hr at 3.0kg/cm2	2	Nos.
Vertical, MSRL, activated carbon filter:		
Capacity 12m3/hr at 3.0kg/cm2	2	Nos.
Flow meter		
65 mm dia.	2	Nos.
Supply, erection, testing and commissioning of Energy meter before electrical panel.	1	Nos.
Ozonator	2	Nos.
Electrical Panel	1	Nos.

Α	EQUIPMENT:		
1.0	CHILLERS :- Make: Carrier		
1.1	WATER COOLED CENTRIFUGAL / SCREW CHILLERS WITH VFD :		
	400TR	3	
2	PRIMARY PUMPS:		
2.1	Chilled Water Primary Pumps ,(25HP)- Make: XYLUM		
	Water Flow Rate – 960 USGPM		
	Head – 15 M	3	
2.2	Hot Water Primary Pumps (5HP) Make: XYLUM		
	Water Flow Rate – 190 USGPM		
	RPM – 1450		
	Suggested Motor HP – 5 HP		
	(2 Working & 1 Standby)		
3	SECONDARY CHILLED WATER PUMPS WITH VFDS : Make: XYLUM		
3.1	For Office Block		

	Water Flow Rate – 590 USGPM		1
	Head – 36 M		
	RPM – 1450		
	Suggested Motor HP – 30 HP		
	Rating - 30HP		
	Efficiency – 75% or more	2	
	(1 Working & 1 Standby)		
3.2	For Convention Block Make: XYLUM		
	Water Flow Rate – 1017 USGPM		
	Head – 32 M		
	RPM – 1450		
	Suggested Motor HP – 40 HP		
	Rating - 40HP		
	Efficiency – 75% or more	2	
	(1 Working & 1 Standby)		
3.3	For Food Court & Craft Bazar Block		
0.0	RPM – 1450		
	Suggested Motor HP – 30 HP		
	Efficiency – 75% or more	2	
	(1 Working & 1 Standby)		
3.4	For Museum Block		
	RPM – 1450		
	Suggested Motor HP – 30 HP		
	Efficiency – 75% or more	2	
	(1 Working & 1 Standby)		
4	CONDENSER WATER PUMPS:		

	Water Flow Rate – 1600 USGPM		
	Head – 28 M		
	RPM – 1450		
	Suggested Motor HP – 50 HP		
	Rating - 50HP		
	Efficiency – 75% or more	3	
	(1 Working & 1 Standby)		
5	COOLING TOWER :- Make: PAHARPUR		
	Water Flow rate – 1600 USGPM		
-	Condenser Water In – 97.5oF		
	Condenser Water Out – 90oF		
	Recommended Motor HP – 2 No.15 HP	3	
-	(2 Working & 1 Standby)		
6	ELECTRIC HOT WATER GENERATOR : Make: Rapid cool		
	Capacity – 250 KW		
	Water 'IN' temperature – 50 deg C		
	Capacity - 250 KW		
	Water 'OUT' temperature – 55 deg C	2	
7	AIR HANDLING UNITS : Make: Waves		
	Floor Mounted AHU:		
	Air Quantity (CFM) S.P. (mmWG)		
ii	16000         50           15000         50	6 2	
iii	13500 50	4	
iv	13000 50	1	
V	12500 50	2	
vi	10000 50	2	
vii	9000 50	1	

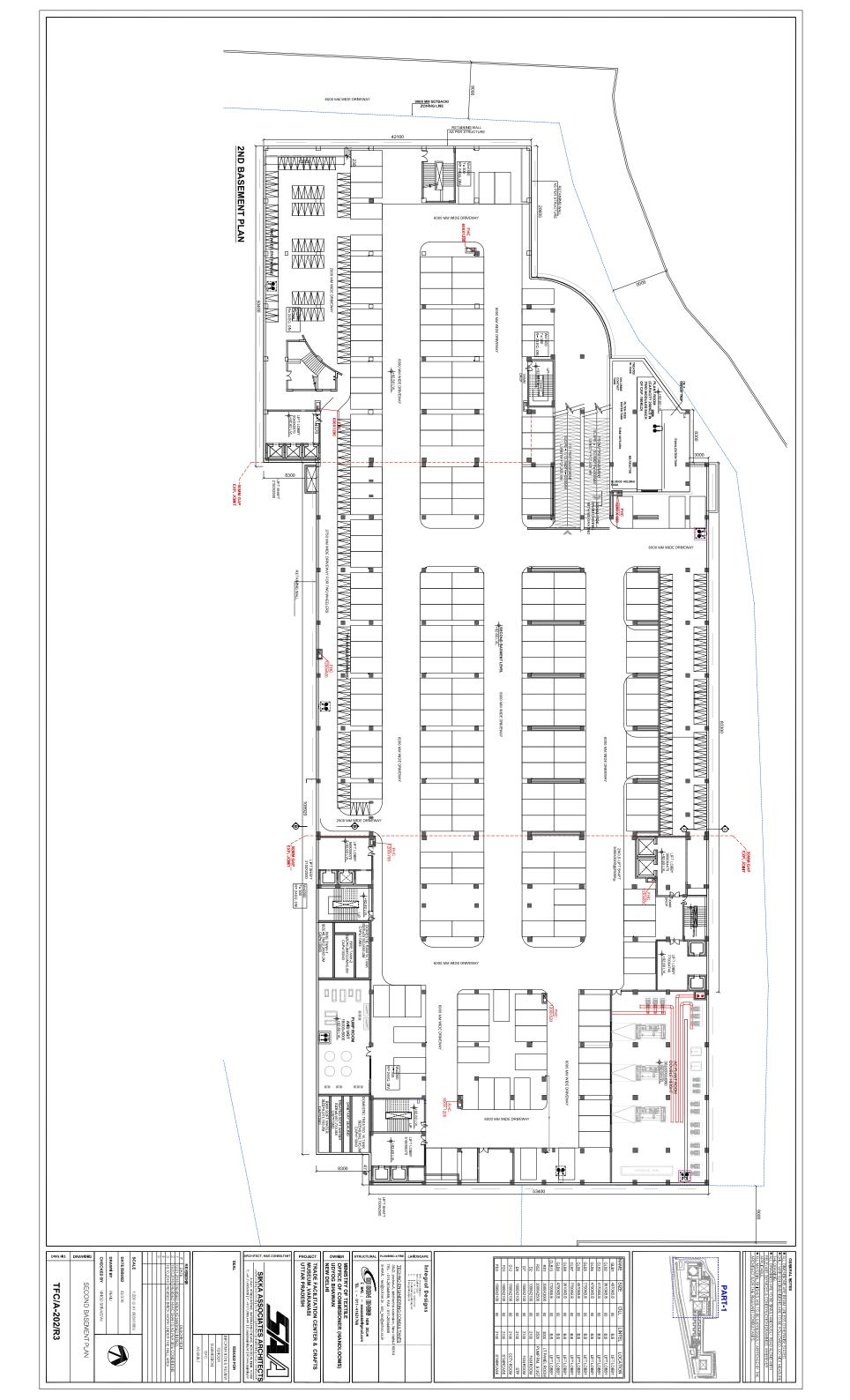
viii	5000 50	1	
	Ceiling Suspended AHU:		
:	Air Quantity (CFM)         S.P. (mmWG)           4000         40	0	
i	4000 40 3500 40	23	
iii	2250 32		
vi	2000 32	5	
V	1750 32	19	
vi	1500 32	7	
vii	1250 32	25	
viii	1000 32	7	
ix	800 32	3	
10.0	FAN COIL UNITS : Waves		
	speed motor, 3 rows cooling coil, cleanable synthetic media filters, SS condensate drain pan with 9mm thick nitrile rubber insulation, GI casing with insulation, coil connections through copper pipes, condensate drain connections, wiring, control wiring in conduit up to thermostat boxes mounted on wall, Anchors, Hangers, Vibration isolators, flexible connection at blower discharge, air vent, ball valve set with and without strainer along with 2-way pressure independent control valve, cooling/heating thermostat with three speed controller for blower motor. Fan coil unit shall be suitable for 230 ± 10% 50 Hz single phase power supply.		
i	1.0 TR nominal capacity - 400 CFM	1	
ii	1.5 TR nominal capacity - 600 CFM	4	
iii	2.0 TR nominal capacity - 800 CFM	1	
11.0	AIR COOLED SPLIT AIR CONDITIONING UNITS :Hitachi		
i 11.0	1.5 TR	12	
ii	2.0 TR	26	+
		-	
12.0	AIR COOLED DUCTABLE TYPE SPLIT AIR CONDITIONING UNITS : Hitachi		
i	3.0 TR	13	
ii	5.5 TR	4	
13.0	EVAPORATIVE COOLING SYSTEM (FILL TYPE) : ZECO		

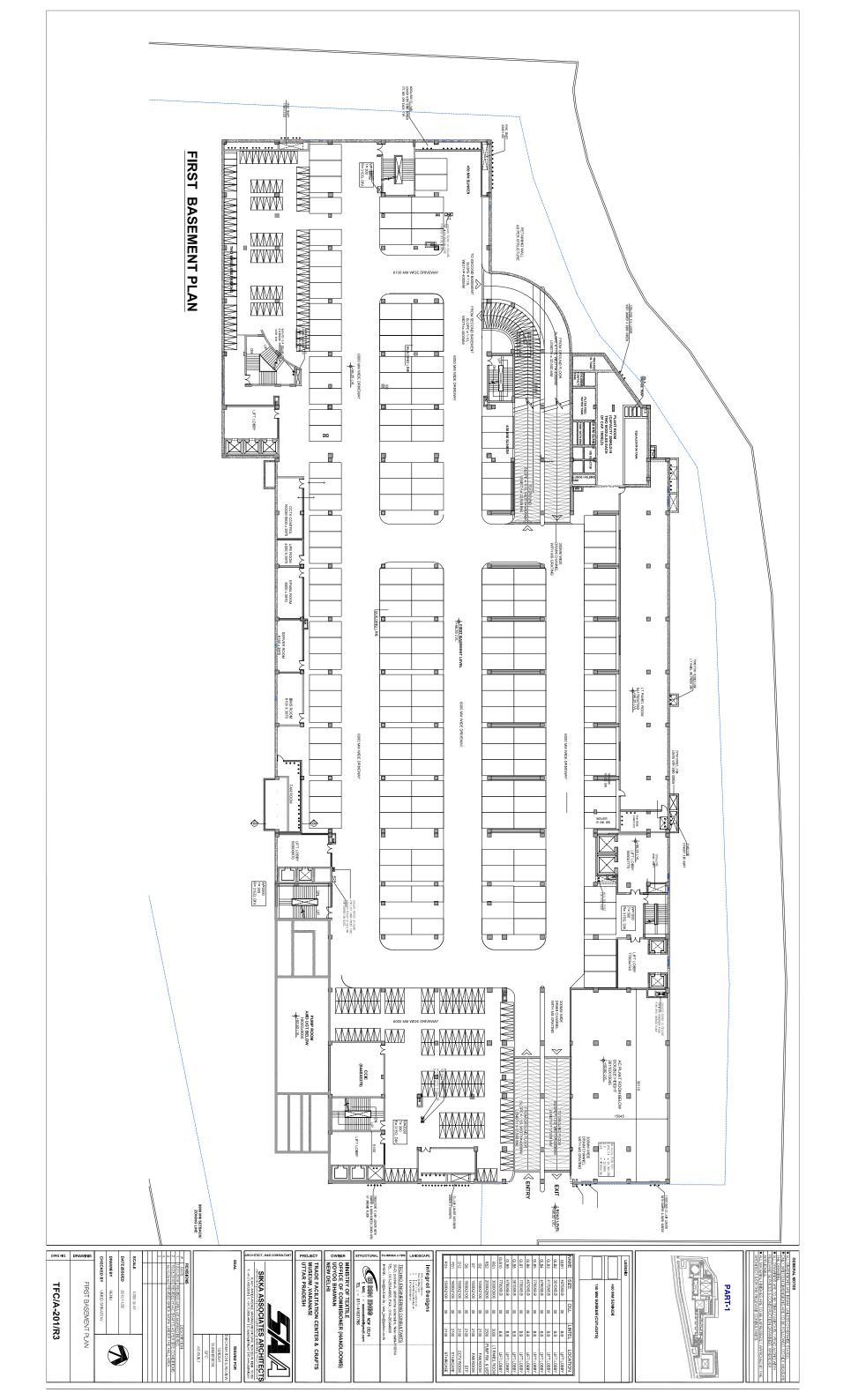
	Air Qty (CFM)	S.P. (mmwg)		
i	12500	50	2	
14.0	DRY SCRUBBER :			
	Air Qty (CFM)	S.P. (mmwg)		
iii	15000	65	2	
16.0	AXIAL FLOW FANS :FLAKWOOD			
16.1	EXHAUST AIR AXI			
	Air Qty (CFM)	S.P. (mmwg)		
i	27500	30	4	
ii	22500	30	1	
iii	20000	30	1	
iv	18000	30	16	
V	15000	30	8	
vi	6000	25	3	
16.2	SUPPLY AIR AXIAL FLOW FANS :			
	Air Qty (CFM)	S.P. (mmwg)		
i	22500	30	1	
ii	20000	30	1	
iii	18000	30	10	
iv	15000	30	8	
V	12000	25	1	
vi	6000	25	9	
17.0	INLINE FANS :			
i	Air Qty (CFM)	S.P.(mmwg)		
ii	1900	25	1	
iii	1800	25	1	

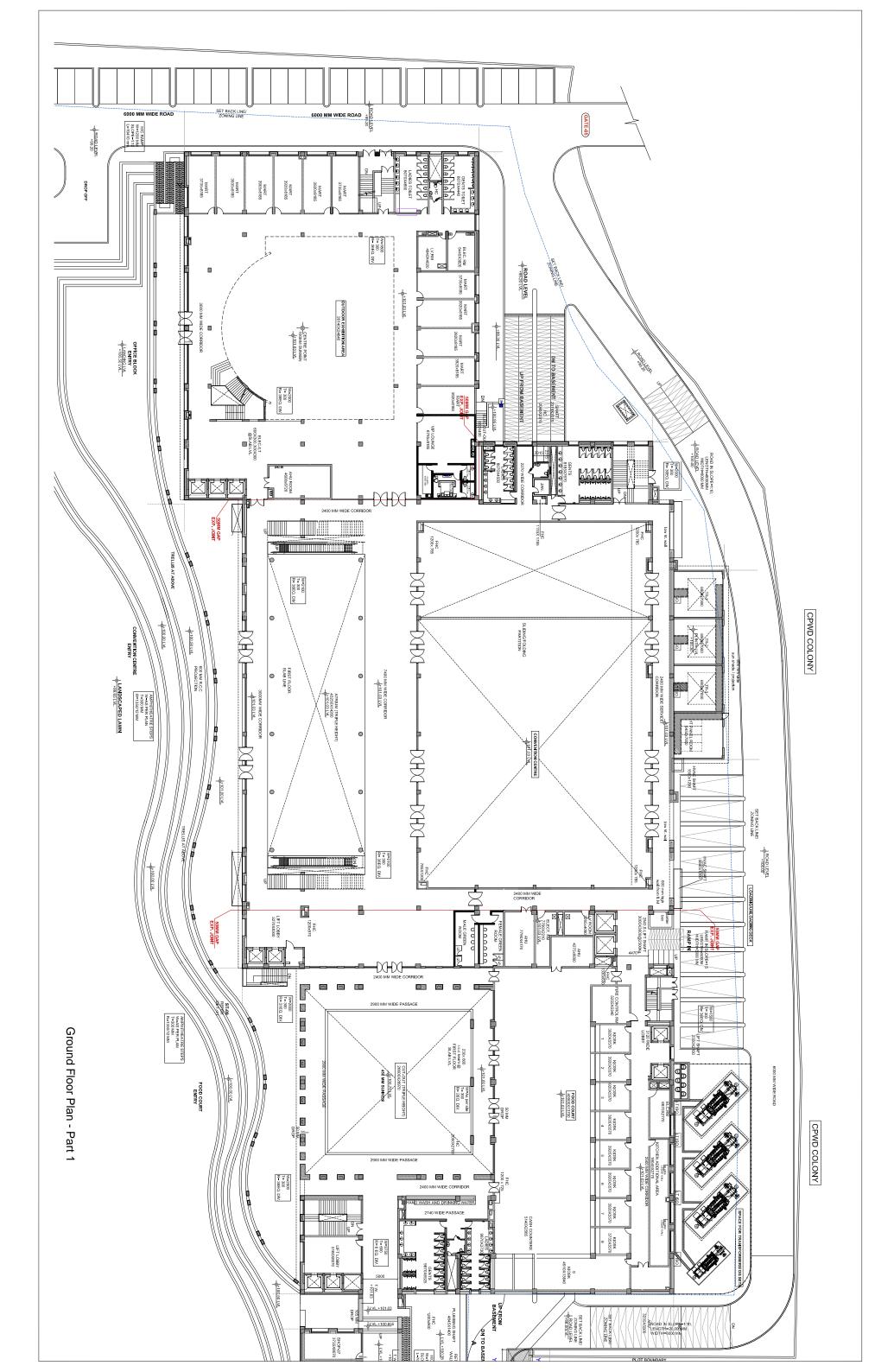
iv	1700 25	2	
v	1500 25	2	
vi	1100 25	13	
vii	900 20	3	
viii	750 20	6	
18.0	PROPELLER FANS :		
i)	200 mm dia 900 RPM	8	
1.1	HVAC MAIN PANEL :		
	Location:- AC Plant Room		
	Power & Control Centre for HVAC Plant Room as described above	1	
2.0	STARTER PANELS FOR FLOOR MOUNTED / CEILING SUSPENDED AHUS / AHU CUM TFA UNITS / AHU FAN SECTIONS / PRESSURISATION & SMOKE EXTRACTION FANS		
a)	40 A MPCB with 15 HP Star Delta Starter	4	
b)	25 A MPCB with 10 HP Star Delta Starter	6	
c)	16 A MPCB with 7.5 HP DOL Starter	11	
d)	16 A MPCB with 5 HP DOL Starter	1	
e)	10 A TP MCB with 2.2 KW DOL Starter	3	
f)	10 A TP MCB with 1.5 KW DOL Starter	3	
g)	10 A TP MCB with 0.75/ 1.1 KW DOL Starter	21	
h)	10 A TP MCB with 0.75 HP / 0.5KW DOL Starter	61	

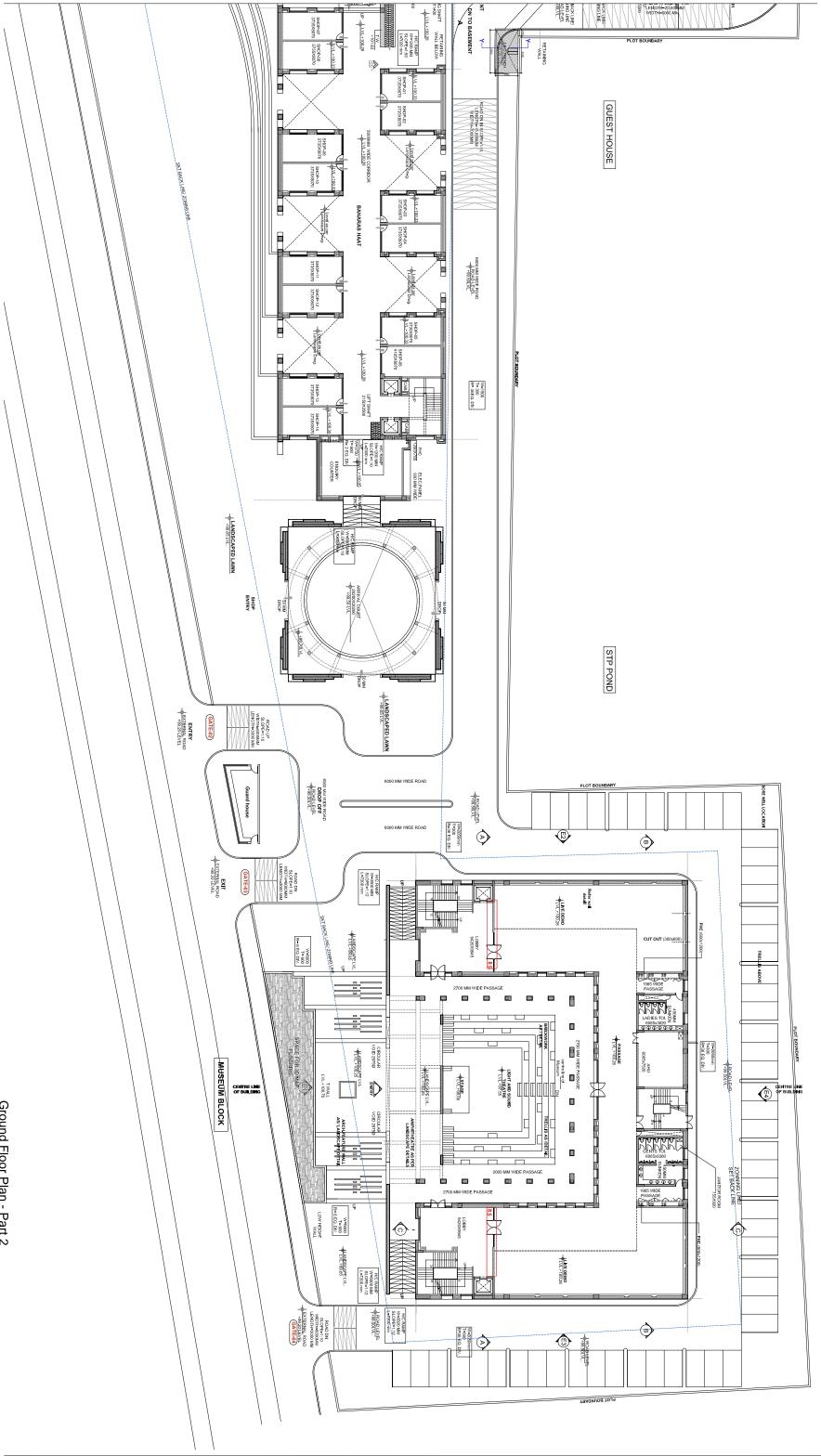
Annexure 3: Drawings for TFC&CM: xv

xv **Source**: Data provided by project Architect SIKKA Associates Architects and Project Management Service Provider NBCC Ltd.

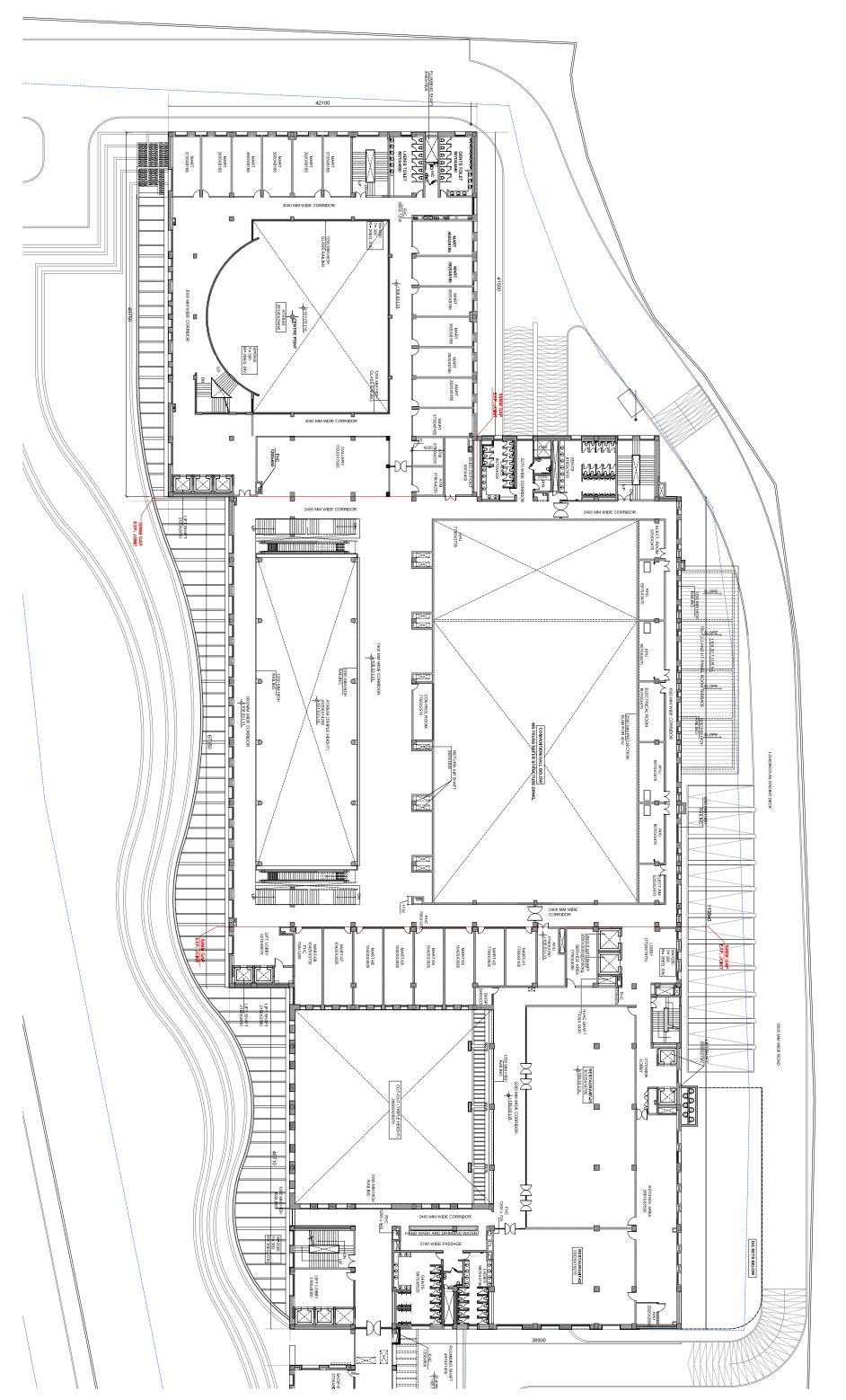


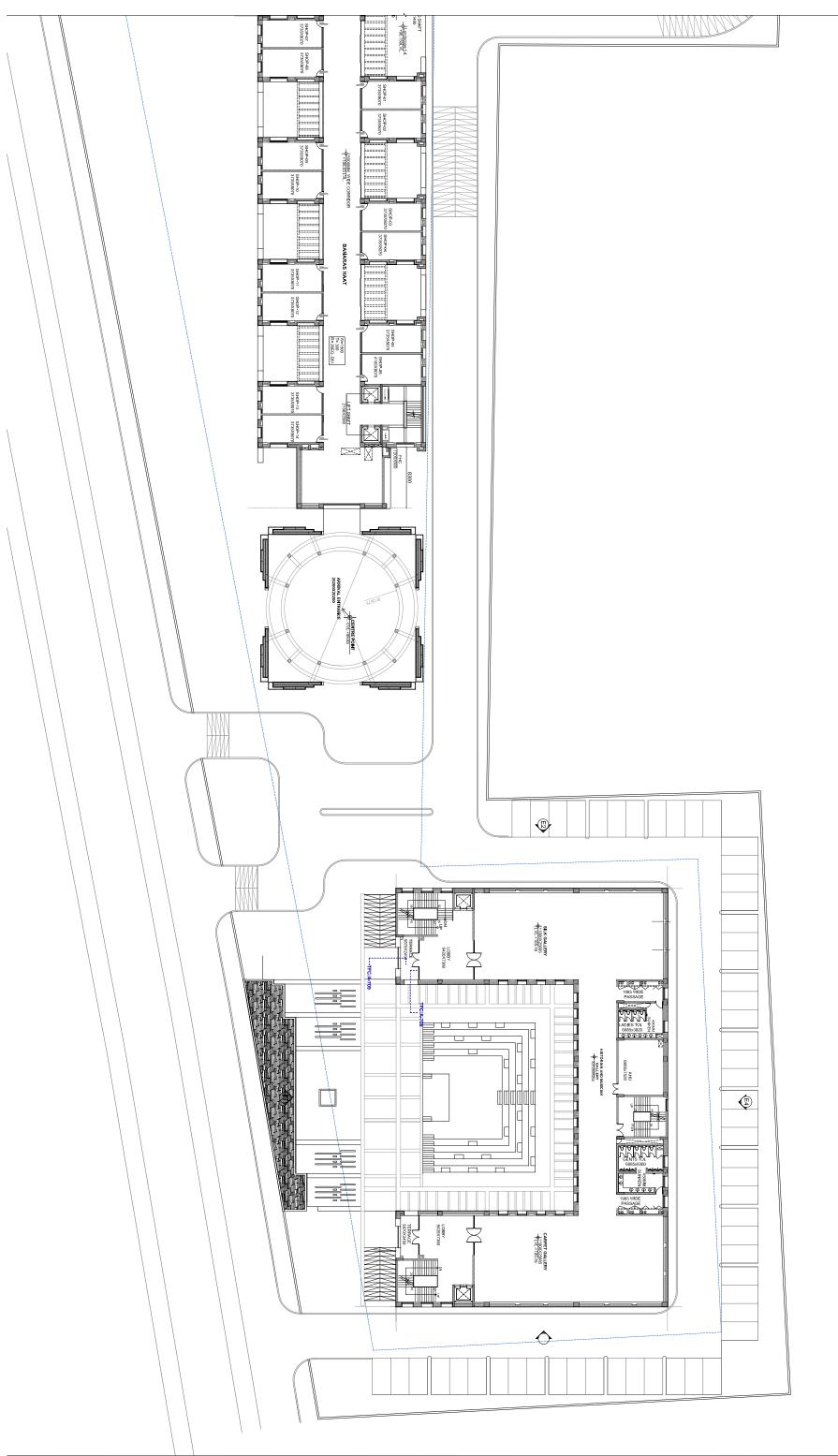


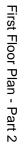


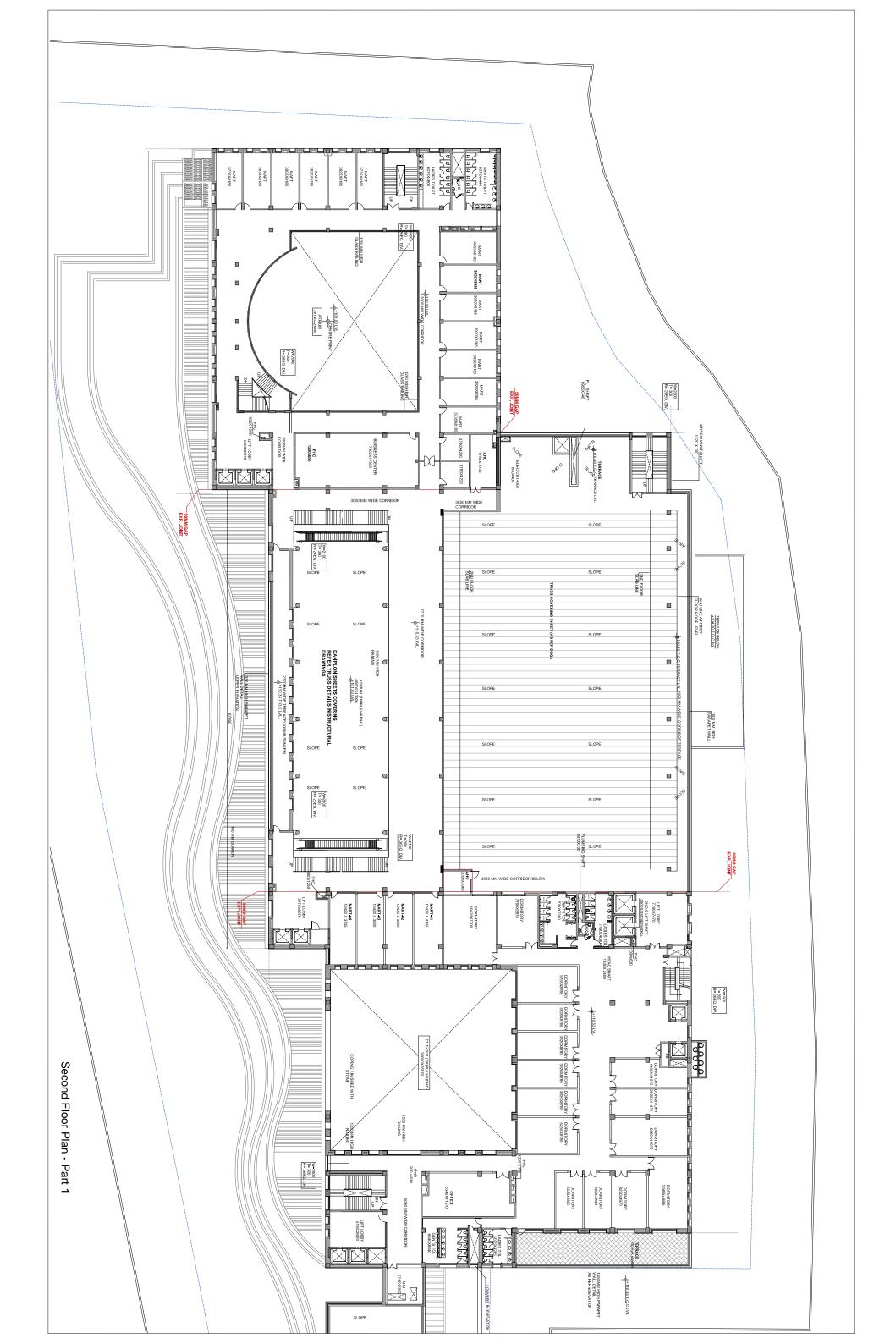


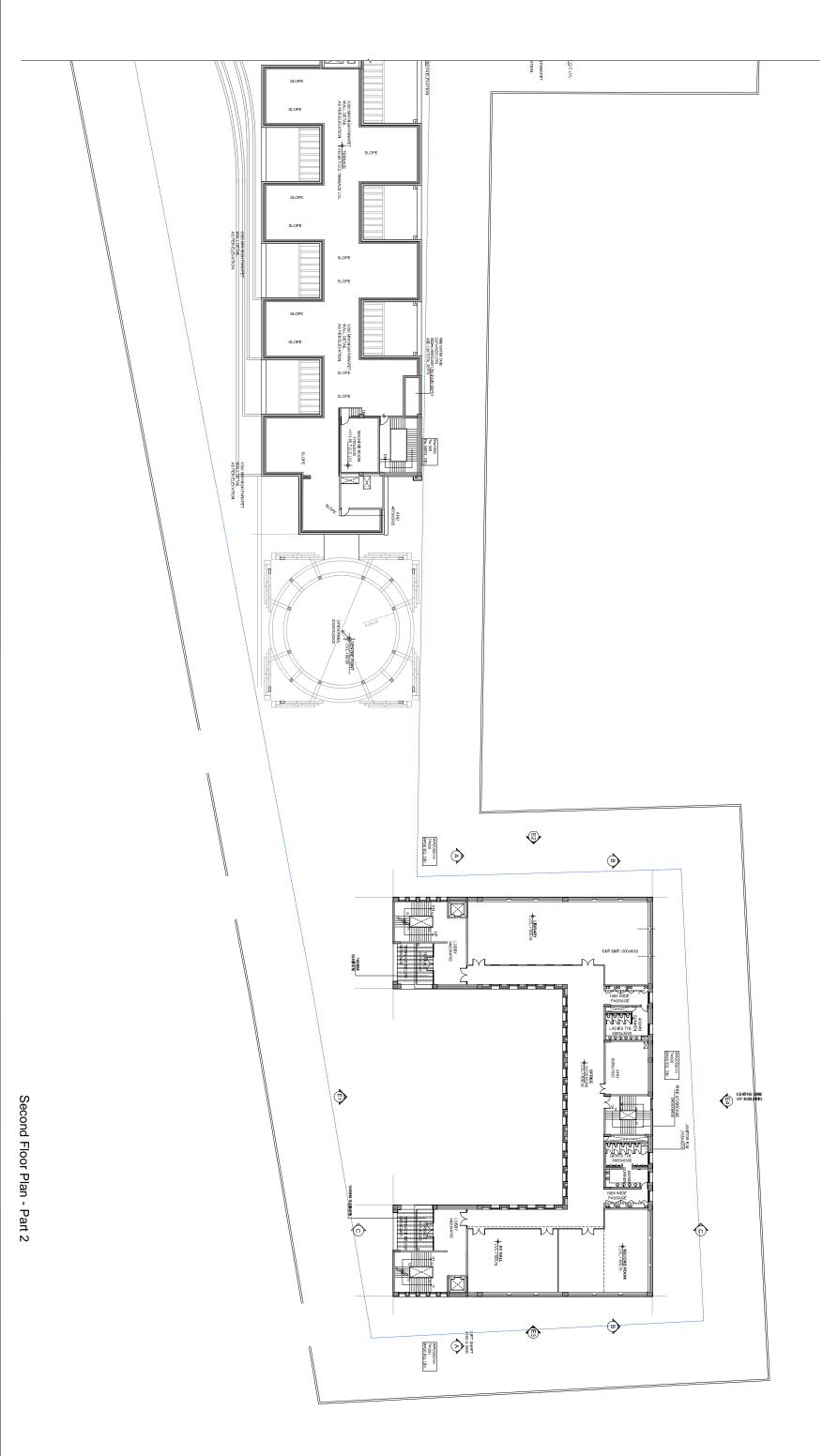
Ground Floor Plan - Part 2

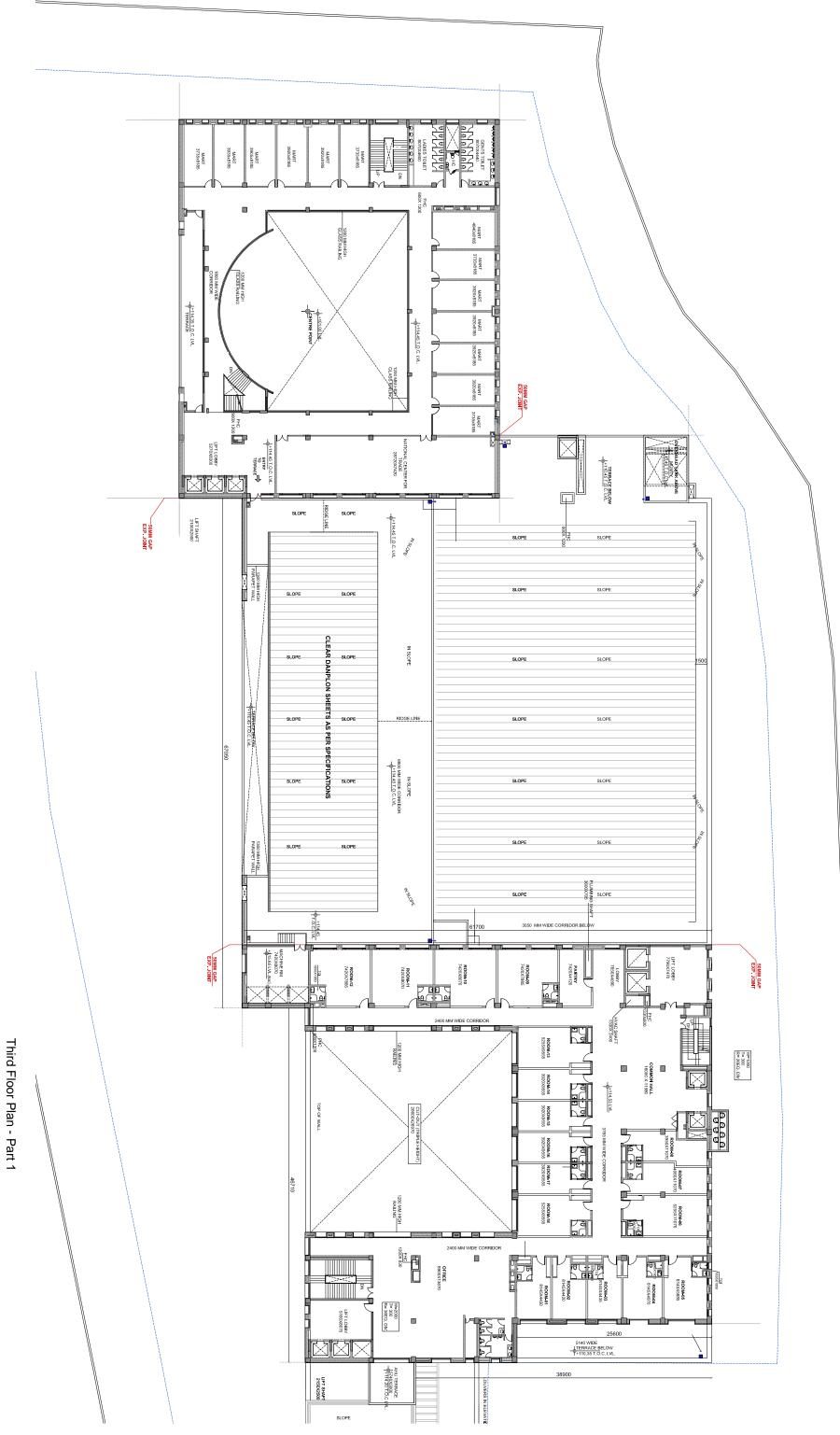


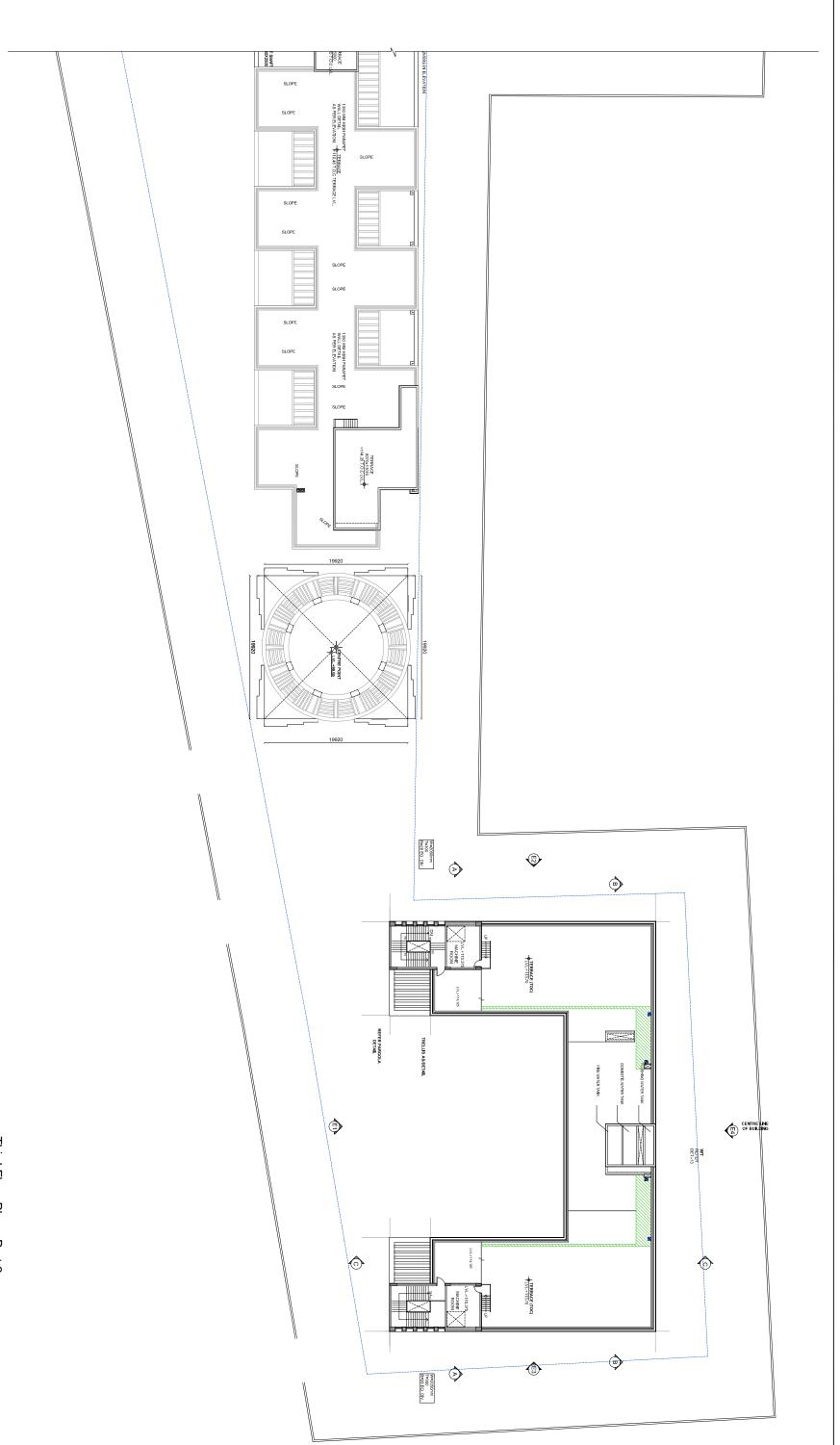












Third Floor Plan - Part 2

