

**PROJECT**

**PLOT NO CS2 AT BLOCK C SWARNJAYANTI  
PURAM GOVINDPURAM GHAZIABAD UTTAR  
PRADESH**

**SUBJECT**

**MEP SERVICES**

**PROJECT REPORT**

**CONSULTANT:**

***Designx Consultancy Services.***

**MEP CONSULTANT**

**1/3404 Ram Nagar Shahdara Street no.-5**

**Delhi-110032**

## INTRODUCTION

The proposed project is a commercial building, located in Ghaziabad, U.P. The building consists of Commercial shops and parking with all modern amenities to be developed

This report intends to basically highlight the technical proposals/points/ parameters, which are proposed to be adopted in the planning and designing of internal & external sanitary engineering for the upcoming master plan.

## ELECTRICAL

### 4.1 SOURCE OF POWER:

As per UPPCL norms power shall be supplied at 433 Volts if total load of the complex is less than 50 KW. If load is more than 50 KW and less than 4 MVA power shall be supplied at 11 KV. If load is more than 4 MVA and less than 20 MVA power shall be supplied at 33 KV. As the total demand load required is **417 KVA**, hence single point connection at 11 KV shall be taken from UPPCL. The power shall be terminated in 11KV metering room comprising 11 KV meter and 11 KV VCB for isolation for each.

### 4.2 ELECTRICITY TARIFF SYSTEM: -

Owner shall pay to UPPCL electricity charges on the basis of readings in 11 KV meter in addition to the fixed charges as per the norms as it will be a bulk supply connection. Owner shall in turn collect electricity charges from the tenants with the help of Energy Management Software which will be used for generating electricity bill for each tenant based on the energy consumption for Lighting, Power, A/C, adjustment of Common Area charges. The software shall have the capability to take in to account the dual tariff (Grid Supply & DG Supply). The software shall have the capability to take the 11 KV meter readings, subtract from these readings the individual readings of all the energy meters and adjust this energy difference amount on to the bills of tenants based on their areas.

### 4.3 SELECTION OF SIZE OF TRANSFORMER: -

The 11 KV power received shall be stepped down to 433 Volts which is the operating voltage, by installing 11 KV/433 Volt Transformer. As per the calculations enclosed in the report the total transformer capacity required is **417 KVA**, for which there will be one Substation comprising 11 KV VCB Panel, **one no. 500 KVA** oil filled type Transformer.

The Transformer shall be ONAN type as it is proposed to being installed in open.

#### 4.4 STAND BY POWER GENERATION: -

As per load calculations enclosed in the report in total DG capacity required is **375.71 KVA** for which it is recommended to provide **1 nos. 400 KVA DG Set** considering almost 100% power backup for entire complex.

It is proposed to provide DG Sets with Power Command Centre (PCC) for AMF & Auto synchronizing function. Separately PLC based Auto Load Management system shall be provided which will function in coordination with Power Command Centre provided in each DG Set.

DG sets shall be provided outside in Acoustic Enclosure and exhaust pipes as per CPCB norms and shall be radiator cooled.

**LOAD SHEET FOR PROPOSED CONVENIENT SHOP PLAN OF PLOT NO CS2 AT BLOCK C SWARNJAYANTI PURAM GOVINDPURAM GHAZIABAD UTTAR PRADESH M/S:- CLEOH HOMEZ & DEKORZ PVT LTD THROUGH AUTHORIZED SIGNATORY SHRI CHANDRA KANT SHARMA,**

S. No.	DESCRIPTION	AREA/UNIT (Sqft.)	TOTAL CONNECTED LOAD (per sq. mtr.)	TOTAL CONNECTED LOAD	DIVERSITY	DEMAND LOAD(KW)
1	BASEMENT FLOOR	2604	15 W	39.06 KW	75%	29.29 KW
2	GROUND FLOOR	4796	15 W	71.93 KW	75%	53.95 KW
3	FIRST FLOOR	4464	15 W	66.97 KW	75%	50.23 KW
4	SECOND FLOOR	2801	15 W	42.02 KW	75%	31.52 KW
5	THIRD FLOOR	1405	15 W	21.08 KW	75%	15.81 KW
	<b>GRAND TOTAL</b>			<b>241.06 KW</b>		<b>180.79 KW</b>

COMMON SERVICES						
1	LIFT LOAD			20.00 KW	80%	16.00 KW
2	PLUMBING LOAD			20.00 KW	80%	16.00 KW
3	STP LOAD			25.00 KW	80%	20.00 KW
4	FIRE FIGHTING LOAD			175.00 KW	10%	17.50 KW
5	EXTERNAL LIGHTING			5.00 KW	50%	2.50 KW
6	BASEMENT -1	9438.5	0.5 W	4.72 KW	80%	3.78 KW
7	BASEMENT (VENTILATION)			140.00 KW		40.00 KW
8	COMMON AREA			5.00 KW	80%	4.00 KW
	<b>TOTAL</b>			<b>394.72 KW</b>		<b>119.78 KW</b>
	<b>GRAND TOTAL</b>			<b>394.72 KW</b>		<b>119.78 KW</b>

GRAND TOTAL		635.78 KW	300.57 KW
<b>TRANSFORMER SELECTION</b>			
Total Maximum Demand Load on Transformer (@100% Overall diversity)		300.57 KW	
Maximum Demand Load in KVA (Power Factor@0.9)		333.96 KVA	
Transformer Capacity Considering 80% Loading		417.46 KVA	
<b>Hence we propose to install 01 Nos. 500 KVA 11KV/415V TRANSFORMER</b>			
<b>D.G. SELECTION</b>			

	Total Maximum Demand Load on DG considering 80% Overall Diversity	<b>240.45 KW</b>
	Maximum Demand Load in KVA (Power Factor@0.8)	<b>300.57 KVA</b>
	D.G Capacity Considering 80% Loading	<b>375.71 KVA</b>
<b>Hence we propose to install 1Nos. 400 KVA DG-SET.</b>		