

DETAILED DEMAND LOAD CALCULATION : AS ON 11/05/2018 (REV:1)

PROJECT: PROPOSED G+V STORIED COMMERCIAL BUILDING COMPLEX AT MOUZA-MALIPUKURIA,SONARPUR, DIST-SOUTH 24 PGS. FOR J.G. DEVELOPMENT PVT. LTD.

NOTE: THE TOTAL REQUIRED LOAD CALCULATED COSIDERING ALL COMMON AREAS, SHOPS, SERVICES & UTILITIES

SR.NO	DESCRIPTION OF AREA	LIGHTING LOAD		RAW-POWER LOAD		UPS-POWER LOAD		HVAC LOAD		TOTAL CONNECTED LOAD (KW)	WATT/SFT	MAX. DEMAND FACTOR	MAX. DEMAND LOAD (KW) FOR MAIN SUPPLY	DG BACK-UP DURING POWER FAILURE (KW)	DG BACK-UP DURING FIRE (KW)
		LOAD/WATT (SFT)	TOTAL (KW)	LOAD/WATT (SFT)	TOTAL (KW)	LOAD/WATT (SFT)	TOTAL (KW)	LOAD/WATT (SFT)	TOTAL (KW)						
INDOOR AREA-COMMERCIAL - BLOCK-4 (G+V)															
GROUND FLOOR															
1	COMMON AREA	1,398.57	SFT	0.35	0.49	0.10	0.14			0.63	0.45	0.80	0.50	0.50	0.49
2	RETAIL AREA	3,263.32	SFT	0.50	1.63	0.25	0.82	1.00	3.26	10.00	32.63	38.34	11.75	0.80	30.68
FIRST FLOOR															
3	COMMON AREA	1,385.94	SFT	0.35	0.49	0.10	0.14			0.62	0.45	0.80	0.50	0.50	0.49
4	RETAIL AREA	3,233.86	SFT	0.50	1.62	0.25	0.81	1.00	3.23	10.00	32.34	38.00	11.75	0.80	30.40
SECOND FLOOR															
5	COMMON AREA	1,385.94	SFT	0.35	0.49	0.10	0.14			0.62	0.45	0.80	0.50	0.50	0.49
6	OFFICE AREA	3,233.86	SFT	0.50	1.62	0.40	1.29	2.00	6.47	10.00	32.34	41.72	12.90	0.80	33.37
THIRD FLOOR															
7	COMMON AREA	1,385.94	SFT	0.35	0.49	0.10	0.14			0.62	0.45	0.80	0.50	0.50	0.49
8	OFFICE AREA	3,233.86	SFT	0.50	1.62	0.40	1.29	2.00	6.47	10.00	32.34	41.72	12.90	0.80	33.37
FOURTH FLOOR															
9	COMMON AREA	1,385.94	SFT	0.35	0.49	0.10	0.14			0.62	0.45	0.80	0.50	0.50	0.49
10	OFFICE AREA	3,233.86	SFT	0.50	1.62	0.40	1.29	2.00	6.47	10.00	32.34	41.72	12.90	0.80	33.37
FIFTH FLOOR															
11	COMMON AREA	1,385.94	SFT	0.35	0.49	0.10	0.14			0.62	0.45	0.80	0.50	0.50	0.49
12	OFFICE AREA	3,233.86	SFT	0.50	1.62	0.40	1.29	2.00	6.47	10.00	32.34	41.72	12.90	0.80	33.37
FIRE-FIGHTING LOAD															
13	MAIN FIRE PUMP	2.00	NOS				55.00			110.00	-	1.00	110.00	110.00	110.00
14	JOCKEY PUMP	1.00	NOS				5.50			3.73	-	-	-	-	-
* During fire,with or without the Jockey pump,Main will pumps start.															
** During fire,HVAC load will not be stopped by interlocking arrangement.															
OUTDOOR AREA															
15	YARD AND OUTDOOR AREA									2.50	-	0.80	2.00	2.00	
UTILITY LOAD															
16	LIFT LOAD	1.00	NOS				7.46			7.46	-	0.60	4.48	4.48	4.48
17	MECHANICAL CAR PARKING LOAD	2.00	NOS				1.50			3.00	-	1.00	3.00	3.00	
PHE LOAD															
18	SUMP PUMP (2NOS =1W +1S - ACTUAL)	1.00	NOS				0.55			0.55	-	0.60	0.33	0.33	0.33
19	RAW WATER FEED PUMP (2NOS =1W +1S - ACTUAL)	1.00	NOS				0.75			0.75	-	0.60	0.45	0.45	0.45
20	DOMESTIC WATER TRANSFER PUMP (BL-4) (2NOS =1W +1S)	1.00	NOS				1.10			1.10	-	0.80	0.88	0.88	
TOTAL BUILT-UP AREA		27,760.89	Sft												
TOTAL CONNECTED LOAD (KW)										376.05					
TOTAL DEMAND LOAD (KW)												318.70	318.70	127.89	
TOTAL DEMAND LOAD AT 0.8P.F. LOAD (KVA)													398.38		
HENCE, THE CONTRACT DEMAND (KVA) WITH WBSIEDCL												SAY,	≈ 398		
HENCE, THE CONTRACT DEMAND (HP) WITH WBSIEDCL												SAY,	≈ 424		
TOTAL DEMAND LOAD AT 0.8P.F. LOAD (KVA)													398.38		
EFFICIENCY SELECTED OF TRANSFORMER @85%													468.68		
HENCE, TRANSFORMER IS PROPOSED (KVA)												SAY,	≈ 469		
TOTAL DEMAND LOAD AT 0.8P.F. LOAD (KVA)													468.68		
EFFICIENCY SELECTED OF DG-SET @80%													585.84		
HENCE, DIESEL-GENERATOR IS PROPOSED (KVA)												SAY,	≈ 498	398.38	
													497.97	398.38	
													≈ 498	497.97	
													1X500	1X500	