#### <u>Electrical load Calculation - Group Housing "La Residentia"</u> at Plot No. 06A, Tech Zone - 4 at Noida Extn.

#### **SUBSTATION SUMMARY**

S.no	Description	Nos. o	of Unit				Total Loa	ad	kVA/Unit
CALC	CULATION FOR TRANSFORMER								
1	Phase - 01	1484				Ш	4760	KVA	3.21 kVA/Unit
2	Phase - 02	1772				II	5720	KVA	3.23 kVA/Unit
	Total	3256				-	10480	KVA	

Recommended Transformers = Phase- 01 : - 4 nos 1600 KVA & for Phase-02 : - 2 nos. 2000 KVA & 2 nos. 1600 KVA

CALC	CULATION FOR DG SETS							
3	Phase - 01	1484			II	3880	KVA	2.61 kVA/Unit
4	Phase - 02	1772			Ш	4590	KVA	2.59 kVA/Unit
	Total	3256			=	8470	KVA	

Recommended DG SETS = Phase- 01 : - 2 nos 1010 KVA & 4 nos 500 KVA & for Phase-02 : - 2 nos 1010 KVA & 4 nos 750 KVA

#### <u>Electrical load Calculation - Group Housing "La Residentia"</u> <u>at Plot No. 06A, Tech Zone - 4 at Noida Extn.</u>

S.no	Description		No.	of unit	L	oad pe	er Uni	t		Total Lo	ad
	TOWER - 1 &7 (B+P+G+22)		Nos o	f Tower	s	=	2				
1	4 BHK + 5 T + Servant		184	units	@	7.90	KW		=	1454	KW
ı	(158 sq M @ 50 W/sqM =	7.90 KW)	104	units	9	7.50	IXVV			1434	IXVV
	TOWER - 2, 14 & 16 (B+P+G+18)		Nos o	f Tower	s	II	3				
2	3 BHK + 2 T (Large)		228	units	@	5.20	KW			1187	KW
	(104 sq M @ 50 W/sqM =	5.20 KW)	7 220	uiiis	w w	5.20	IXVV			1107	rvv
	TOWER - 3 & 17 (B+P+G+18)		Nos o	f Tower	s	=	2				
3	3 BHK + 3 T + Study		76	units	@	5.95	KW		=	452	KW
5	(119 sq M @ 50 W/sqM =	5.95 KW)	'	uriits	9)	5.95	IXVV		1	402	IXVV
4	3 BHK + 4 T + Servant		76	units	@	6.70	KW			509	KW
-	(134 sq M @ 50 W/sqM =	6.70 KW)	] ′°	units	٣	0.70	IXVV			309	IXVV
	TOWER - 4 (B+P+G+22)		Nos o	f Tower	s	II	1				
5	2 BHK + 2T		92	units	@	4.09	KW			376	KW
	(82 sq M @ 50 W/sqM =	4.09 KW)	32	units	۳	4.09	IXVV		_	370	IXVV
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)		Nos o	f Tower	s	II	5				
6	2 BHK + 2T + Study		190	units	@	3.95	KW		_	750	KW
0	(79 sq M @ 50 W/sqM =	3.95 KW)	190	units	9	5.85	IXVV		ı	730	IXVV
7	2 BHK + 2T	-	190	units	@	3.54	KW			672	KW
'	(71 sq M @ 50 W/sqM =	3.54 KW)	190	uiiis	w w	3.54	IXVV		=	072	rvv
	TOWER - 8 & 10 (B+P+G+13)		Nos o	f Tower	s	II	2				
8	3 BHK + 2T		112	units	@	4.66	KW			522	KW
0	(93 sq M @ 50 W/sqM =	4.66 KW)	] '''	units	w w	4.00	r\vv		=	322	rvv

S.no	Description		No.	of unit	L	oad p	er Uni	it		Total Lo	ad
	TOWER - 9 (B+P+G+22)		Nos o	f Tower	s	=	1				
9	3 BHK + 3 T + Study		46	units	@	5.95	KW		_	274	KW
3	(119 sq M @ 50 W/sqM =	5.95 KW)	40	units	w	3.93	IXVV		_	274	IXVV
10	3 BHK + 4 T + Servant		46	units	@	6.70	KW		_	308	KW
	(134 sq M @ 50 W/sqM =	6.70 KW)		dinto	Ĺ	0.70					
	TOWER - 11 (B+P+G+22)		Nos o	f Tower	s	=	1				
11	2 BHK + 2T + Study		46	units	@	3.95	KW		_	182	KW
11	(79 sq M @ 50 W/sqM =	3.95 KW)	40	units	w	3.95	KVV		=	102	rvv
12	2 BHK + 2T		46	units	@	3.54	KW		_	163	KW
12	(71 sq M @ 50 W/sqM =	3.54 KW)	10	dillo		0.04	IXVV			100	1000
	TOWER - 13 & 19 (B+P+G+18)		Nos o	f Tower	s	=	2				
13	3 BHK + 2T		152	units	@	4.66	KW		_	708	KW
10	(93 sq M @ 50 W/sqM =	4.66 KW)	102	dillo		1.00	1			700	
	COMMON SERVICES - TOW	<u>ERS</u>									
	TOWER - 1 &7 (B+P+G+22)		Nos o	f Tower	s	=	2				
14	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW	=	=	20	KW
15	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW	=		30	KW
16	Common Lights		2	towers	@	5.0	KW	=	=	10	KW
	TOWER - 2, 14 & 16 (B+P+G+18)		Nos o	f Tower	s	=	3				
17	Elevators (13 Passenger) 1.5	mps	3	nos	@	10.0	KW	=	=	30	KW
18	Elevators (16 Passenger) 1.5	mps	3	nos	@	15.0	KW	=		45	KW
19	Common Lights		3	towers	@	3.0	KW	=	=	9	KW
	TOWER - 3 & 17 (B+P+G+18)		Nos o	f Tower	s	II	2				
20	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW	=	=	20	KW
21	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW	=	=	30	KW
22	Common Lights		2	towers	@	4.0	KW	=	=	8	KW

S.no	Description		No.	of unit	L	oad po	er Uni	it	Total Lo	ad
	TOWER - 4 (B+P+G+22)		Nos o	f Tower	s	=	1			
23	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW	=	10	KW
24	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW	=	15	KW
25	Common Lights		1	towers	@	4.0	KW	=	4	KW
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)		Nos o	f Tower	s	=	5			
26	Elevators (13 Passenger) 1.5	mps	5	nos	@	10.0	KW	=	50	KW
27	Elevators (16 Passenger) 1.5	mps	5	nos	@	15.0	KW	=	75	KW
28	Common Lights		5	towers	@	3.0	KW	=	15	KW
	TOWER - 8 & 10 (B+P+G+13)		Nos c	f Tower	s	=	2			
29	Elevators (13 Passenger) 1.0	mps	2	nos	@	7.0	KW	=	14	KW
30	Elevators (16 Passenger) 1.0	mps	2	nos	@	9.0	KW	=	18	KW
31	Common Lights		2	towers	@	3.0	KW	=	6	KW
	TOWER - 9 (B+P+G+22)		Nos c	f Tower	s	=	1			
32	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW	=	10	KW
33	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW	=	15	KW
34	Common Lights		1	towers	@	5.0	KW	=	5	KW
	TOWER - 11 (B+P+G+22)		Nos o	of Tower	s	=	1			
35	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW	=	10	KW
36	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW	=	15	KW
37	Common Lights		1	towers	@	4.0	KW	=	4	KW
	TOWER - 13 & 19 (B+P+G+18)		Nos o	f Tower	s	=	2			
38	Elevators (13 Passenger) 1.5	mps	2 nos		@	10.0	KW	=	20	KW
39	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW	=	30	KW
40	Common Lights		2	towers	@	4.0	KW	=	8	KW

S.no	Description		No. o	of unit	L	oad pe	er Uni	t	•	Total Lo	ad
	COMMON SERVICES - Gene	<u>eral</u>									
41	External / Gate / Landscape li	ghting							=	10	KW
42	Basement lights		33500	sqm	@	1.0	W/sqr	n	=	34	KW
43	Basement Ventillation								=	200	KW
44	Club / Swimming pool								=	250	KW
						To	tal Lo	ad	_	8576	KW
	В	By taking C	overal	Divers	sity					4288	KW
		E	By taki	ing Pov	ver	factor	0.90		=>	4760	KVA
	Total Elec	trical Loa	d (Pha	ase-01)	=	4760	KVA		!		

otal Electrical Load (Phase-01) = 4/60

Recommended Transformers (at 85% loading) = 2 nos. 1600 KVA each at 2 different locations.

(Total 4 nos 1600 KVA each)

# Electrical load Calculation - Group Housing "La Residentia" at Plot No. 06A, Tech Zone - 4 at Noida Extn.

S.no	Description		No.	of unit	L	oad pe	er Uni	t		Total Lo	ad
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)		Nos o	f Tower	s	=	5				
1	2 BHK + 2T + Study		230	units	@	3.95	KW			908	KW
ı	(79 sq M @ 50 W/sqM =	3.95 KW)	230	uniis	œ	3.93	ΚVV		=	900	ΚVV
2	2 BHK + 2T		230	units	@	3.54	KW			813	KW
	(71 sq M @ 50 W/sqM =	3.54 KW)	230	uniis	w	3.34	KVV		=	013	ΚVV
	TOWER - 21 & 23 (B+P+G+22)		Nos o	f Tower	s	II	2				
3	3 BHK + 3 T + Study	-	92	units	(9)	5.95	KW		II	547	KW
3	(119 sq M @ 50 W/sqM =	5.95 KW)	32	นาแธ	9)	5.95	IXVV		ı	347	IXVV
4	3 BHK + 4 T + Servant		92	units	@	6.70	KW		II	616	KW
4	(134 sq M @ 50 W/sqM =	6.70 KW)	32	นาแธ	3)	0.70	IXVV		ı	010	IXVV
	TOWER - 25 (B+P+G+22)		Nos o	f Tower	s	II	1				
5	3 BHK + 2 T (Large)		92	units	(9)	5.20	KW		II	479	KW
	(104 sq M @ 50 W/sqM =	5.20 KW)	92	uiilo	9	5.20	IXVV		1	473	IXVV
	TOWER - 26, 29 & 30 (B+P+G+22)		Nos o	f Tower	s	II	3				
6	3 BHK + 2T	,	276	units	(9)	4.66	KW		II	1286	KW
	(93 sq M @ 50 W/sqM =	4.66 KW)	270	นาแธ	9	4.00	IXVV		ı	1200	IXVV
	TOWER - 28 & 31 (B+P+G+22)		Nos o	f Tower	s	II	2				
7	2 BHK + 2T	-	184	units	@	4.09	KW			752	KW
	(82 sq M @ 50 W/sqM =	4.09 KW)	104	uiiilo	w	4.09	IZVV		II	132	IXVV
	TOWER - 33 (B+P+G+18)		Nos o	f Tower	s	=	1				
8	2 BHK + 2T + Study		76	units	@	3.95	KW		II	300	KW
	(79 sq M @ 50 W/sqM =	3.95 KW)	70	uiiio	9	0.90	17.00			300	1111

S.no	Description		No.	of unit	L	oad pe	er Uni	t		Total Lo	ad
	TOWER - 34 (B+P+G+20)		Nos o	f Tower	s	=	1				
9	3 BHK + 3 T + Study		42	units	@	5.95	KW			250	KW
9	(119 sq M @ 50 W/sqM =	5.95 KW)	42	units	w	5.95	IXVV			230	IXVV
10	3 BHK + 4 T + Servant		42	units	@	6.70	KW			281	KW
10	(134 sq M @ 50 W/sqM =	6.70 KW)	42	units	w	0.70	IXVV			201	IXVV
	TOWER - 35 (B+P+G+18)		Nos o	f Tower	s	=	1				
11	2 BHK + 2T + Study		38	units	@	3.95	KW			150	KW
11	(79 sq M @ 50 W/sqM =	3.95 KW)		units	w	3.93	IXVV			130	IXVV
12	2 BHK + 2T		- 38	units	@	3.54	KW			134	KW
12	(71 sq M @ 50 W/sqM =	3.54 KW)	] 30	units	۳	3.54	IXVV			134	IXVV
	TOWER - 36 (B+P+G+21)		Nos o	f Tower	s	=	1				
13	3 BHK + 3 T + Study		44	units	@	5.95	KW			262	KW
13	(119 sq M @ 50 W/sqM =	5.95 KW)	44	units	w	5.95	IXVV			202	IXVV
14	3 BHK + 4 T + Servant		44	units	@	6.70	KW			295	KW
14	(134 sq M @ 50 W/sqM =	6.70 KW)	44	units	w	0.70	IXVV			293	IXVV
	TOWER - 37 (B+P+G+18)		Nos o	f Tower	s	=	1				
15	3 BHK + 2 T (Large)		76	units	@	5.20	KW			396	KW
13	(104 sq M @ 50 W/sqM =	5.20 KW)	] ′°	units	w	5.20	IXVV			390	IXVV
	TOWER - 38 (B+P+G+20)		Nos o	f Tower	s	=	1				
16	3 BHK + 2 T (Large)		- 84	units	@	5.20	KW			437	KW
10	(104 sq M @ 50 W/sqM =	5.20 KW)	04	units	w.	5.20	IXVV		=	437	IXVV
	TOWER - 39 (B+P+G+22)		Nos o	f Tower	s	=	1				
17	4 BHK + 5 T + Servant		92	unito	@	7.90	KW			727	KW
'′	(158 sq M @ 50 W/sqM =	7.90 KW)	92	units	w	7.90	r\VV		=	121	Γ\VV

S.no	Description		No.	of unit	L	oad p	er Uni	it		Total Lo	ad
	COMMON SERVICES - TOW	<u>ERS</u>									
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)		Nos o	of Tower	s	=	5				
18	Elevators (13 Passenger) 1.5	mps	5	nos	@	10.0	KW		=	50	KW
19	Elevators (16 Passenger) 1.5	mps	5	nos	@	15.0	KW		=	75	KW
20	Common Lights		5	towers	@	4.0	KW		=	20	KW
	TOWER - 21 & 23 (B+P+G+22)		Nos o	f Tower	s	=	2				
21	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW		=	20	KW
22	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW		=	30	KW
23	Common Lights		2	towers	@	5.0	KW		=	10	KW
	TOWER - 25 (B+P+G+22)		Nos o	f Tower	s	II	1				
24	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW
25	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
26	Common Lights		1	towers	@	4.0	KW		=	4	KW
	TOWER - 26, 29 & 30 (B+P+G+22)		Nos o	f Tower	s	=	3				
27	Elevators (13 Passenger) 1.5	mps	3	nos	@	10.0	KW		=	30	KW
28	Elevators (16 Passenger) 1.5	mps	3	nos	@	15.0	KW		=	45	KW
29	Common Lights		3	towers	@	5.0	KW		=	15	KW
	TOWER - 28 & 31 (B+P+G+22)		Nos o	f Tower	s	II	2				
30	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW		=	20	KW
31	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW		=	30	KW
32	Common Lights		2	towers	@	4.0	KW		=	8	KW
	TOWER - 33 (B+P+G+18)		Nos o	f Tower	s	=	1				
33	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW
34	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
35	Common Lights		1	towers	@	3.0	KW		=	3	KW

S.no	Description		No.	of unit	L	oad p	er Uni	t		Total Lo	ad
	TOWER - 34 (B+P+G+20)		Nos o	f Tower	s	=	1				
36	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW
37	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
38	Common Lights		1	towers	@	4.0	KW		=	4	KW
	TOWER - 35 (B+P+G+18)		Nos o	f Tower	s	=	1				
39	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW
40	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
41	Common Lights		1	towers	@	3.0	KW		=	3	KW
	TOWER - 36 (B+P+G+21)		Nos o	f Tower	s	=	1				
42	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW
43	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
44	Common Lights		1	towers	@	5.0	KW		=	5	KW
	TOWER - 37 (B+P+G+18)		Nos o	f Tower	s	=	1				
45	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW
46	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
47	Common Lights		1	towers	@	3.0	KW		=	3	KW
	TOWER - 38 (B+P+G+20)		Nos o	f Tower	s	II	1				
48	Elevators (13 Passenger) 1.5	mps	1	nos	(9)	10.0	KW		=	10	KW
49	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
50	Common Lights		1	towers	@	4.0	KW		=	4	KW
	TOWER - 39 (B+P+G+22)		Nos of Towers		=	1					
51	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW
52	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW
53	Common Lights		1	towers	@	5.0	KW		=	5	KW

S.no	Description	<del>-                                    </del>			er Uni	t		Total Lo	ad		
	COMMON SERVICES - Gene	ral									
54	Tube wells / Water Supply Pur	nps							=	200	KW
55	STP									200	KW
56	External / Gate / Landscape lig	<del>`                                    </del>							=	10	KW
57	Basement lights	37700 sqm @ 1.0 W/sr					W/sqı	n	=	38	KW
58	Basement Ventillation								=	300	KW
59	Commercial etc								=	300	KW
60	Fire pumps (only jockey pump been considered)	s have	2	set	@	15	KW		=	30	KW
		Total I					tal Lo	ad	=	10297	KW
	By taking Overall Diversity factor 5						50	%	=>	5148	KW
	By taking Power factor 0.9						0.90		=>	5720	KVA

Total Electrical Load (Phase-02) = 5720 KVA

Recommended Transformers (at 85% loading) = 2 nos. 2000 KVA & 2 nos. 1600 KVA.

### <u>Essential Electrical Ioad Calculation - Group Housing "La Residentia"</u> <u>at Plot No. 06A, Tech Zone - 4 at Noida Extn.</u>

_		1		_						
S.no	Description	No. o	of unit	L	oad pe	er Uni	t		Total Lo	oad
	TOWER - 1 &7 (B+P+G+22)	Nos o	f Tower	s	=	2				
1	4 BHK + 5 T + Servant	184	units	@	3.00	KW		=	552	KW
	TOWER - 2, 14 & 16 (B+P+G+18)	Nos o	f Tower	s	II	3				
2	3 BHK + 2 T (Large)	228	units	@	2.00	KW		11	456	KW
	TOWER - 3 & 17 (B+P+G+18)	Nos o	f Tower	s	=	2				
3	3 BHK + 3 T + Study	76	units	@	2.00	KW		=	152	KW
4	3 BHK + 4 T + Servant	76	units	@	2.00	KW		11	152	KW
	TOWER - 4 (B+P+G+22)	Nos o	f Tower	s	=	1				
5	2 BHK + 2T	1.00	KW		=	92	KW			
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)	Nos o	f Tower	s	II	5				
6	2 BHK + 2T + Study	190	units	(3)	1.00	KW		Ш	190	KW
7	2 BHK + 2T	190	units	@	1.00	KW		=	190	KW
	TOWER - 8 & 10 (B+P+G+13)	Nos o	f Tower	s	=	2				
8	3 BHK + 2T	112	units	@	2.00	KW		11	224	KW
	TOWER - 9 (B+P+G+22)	Nos o	f Tower	s	II	1				
9	3 BHK + 3 T + Study	46	units	@	2.00	KW		=	92	KW
10	3 BHK + 4 T + Servant	46	units	@	2.00	KW		11	92	KW
	TOWER - 11 (B+P+G+22)	Nos o	f Tower	s	II	1				
11	2 BHK + 2T + Study	46	units	@	1.00	KW		=	46	KW
12	2 BHK + 2T	46	units	@	1.00	KW		=	46	KW
	TOWER - 13 & 19 (B+P+G+18)	Nos o	f Tower	s	=	2				
13	3 BHK + 2T	152	units	@	2.00	KW		=	304	KW
					To	tal Lo	ad	=	2588	KW
	Е	By taking Overal	Divers	sity	factor	100	%	=>	2588	KW
		By tak	ing Pov	ver	factor	0.80		II V	3240	KVA
	Essential Load ( A )							32	240	KVA
-						-	_			

S.no	Description		No. of unit			Load per Unit			Total Load			
	COMMON SERVICES - TOWERS											
	TOWER - 1 &7 (B+P+G+22)		Nos o	f Tower	s	II	2					
14	Elevators (13 Passenger) 1.5	mps	2	nos	(9)	10.0	KW	=	=	20	KW	
15	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW	=	=	30	KW	
16	Common Lights		2	towers	@	5.0	KW	=	=	10	KW	
	TOWER - 2, 14 & 16 (B+P+G+18)		Nos o	f Tower	s	=	3					
17	Elevators (13 Passenger) 1.5	mps	3	nos	@	10.0	KW	=	=	30	KW	
18	Elevators (16 Passenger) 1.5	mps	3	nos	@	15.0	KW	=	=	45	KW	
19	Common Lights		3	towers	@	3.0	KW	=	=	9	KW	
	TOWER - 3 & 17 (B+P+G+18)		Nos of Towers		s	II	2					
20	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW	=	=	20	KW	
21	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW	=	=	30	KW	
22	Common Lights		2	towers	@	4.0	KW	=	=	8	KW	
	TOWER - 4 (B+P+G+22)		Nos o	f Tower	s	II	1					
23	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW	-	=	10	KW	
24	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW	=	=	15	KW	
25	Common Lights		1	towers	@	4.0	KW	=	=	4	KW	
	TOWER - 5, 6, 12, 15 & 18 (B+P+G+18)		Nos o	f Tower	s	II	5					
26	Elevators (13 Passenger) 1.5	mps	5	nos	@	10.0	KW	=	=	50	KW	
27	Elevators (16 Passenger) 1.5	mps	5	nos	@	15.0	KW	=	=	75	KW	
28	Common Lights		5	towers	@	3.0	KW	=	=	15	KW	
	TOWER - 8 & 10 (B+P+G+13)		Nos of Tower		s	=	2					
29	Elevators (13 Passenger) 1.0	mps	2	nos	@	7.0	KW	=		14	KW	
30	Elevators (16 Passenger) 1.0	mps	2	nos	@	9.0	KW	=	=	18	KW	
31	Common Lights		2	towers	@	3.0	KW	=	-	6	KW	

S.no	Description	No. of unit			L	oad pe	er Uni	r Unit		Total Load		
	TOWER - 9 (B+P+G+22)		Nos o	f Tower	s	=	1					
32	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW	
33	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		Ш	15	KW	
34	Common Lights		1	towers	@	5.0	KW		Ш	5	KW	
	TOWER - 11 (B+P+G+22)		Nos o	f Tower	S	=	1					
35	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW	
36	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW	
37	Common Lights		1	towers	@	4.0	KW		=	4	KW	
	TOWER - 13 & 19 (B+P+G+18)		Nos o	f Tower	s	II	2					
38	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW		=	20	KW	
39	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW		Ш	30	KW	
40	Common Lights		2	towers	@	4.0	KW		П	8	KW	
	COMMON SERVICES - Gene	<u>eral</u>										
41	External / Gate / Landscape li	ghting							=	10	KW	
42	Basement lights		33500	sqm	@	1.0	W/sqr	n	=	34	KW	
43	Basement Ventillation								=	200	KW	
44	Club / Swimming pool								=	250	KW	
Тс								ad	=	1020	KW	
By taking Overall Diversity factor 50								%	=>	510	KW	
By taking Power factor 0.80										640	KVA	
Essential Load ( B )										40	KVA	
	Total Essential Loa	d : Phase-	-01 (	A + B )	=		3880	K	VA			

Recommended DG Sets at 95% loading = 1 nos 1010 KVA and 2 nos. 500 KVA at 2 different location.

(Total 2 nos 1010 KVA & 4 nos 500 KVA)

Ess Load Calc\_ La Residentia\_PH-01

#### <u>Essential Electrical Ioad Calculation - Group Housing "La Residentia"</u> <u>at Plot No. 06A, Tech Zone - 4 at Noida Extn.</u>

	<u>-117.02 32</u>												
S.no	Description	No. o	of unit	L	oad pe	er Uni	t	Total Load					
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)	Nos o	f Tower	S	II	5							
1	2 BHK + 2T + Study	230	units	@	1.00	KW		=	230	KW			
2	2 BHK + 2T	230	units	@	1.00	KW		II	230	KW			
	TOWER - 21 & 23 (B+P+G+22)	Nos o	f Tower	s	=	2							
3	3 BHK + 3 T + Study	92	units	@	2.00	KW		=	184	KW			
4	3 BHK + 4 T + Servant	92	units	@	2.00	KW		II	184	KW			
	TOWER - 25 (B+P+G+22)	Nos o	f Tower	s	II	1							
5	3 BHK + 2 T (Large)	92	units	@	2.00	KW		II	184	KW			
	TOWER - 26, 29 & 30 (B+P+G+22)	Nos o	Nos of Towers			3							
6	3 BHK + 2T	276	units	@	2.00	KW		=	552	KW			
	TOWER - 28 & 31 (B+P+G+22)	Nos o	Nos of Towers			2							
7	2 BHK + 2T	184	units	@	1.00	KW		=	184	KW			
	TOWER - 33 (B+P+G+18)	Nos o	f Tower	s	II	1							
8	2 BHK + 2T + Study	76	units	@	1.00	KW		=	76	KW			
	TOWER - 34 (B+P+G+20)	Nos o	f Tower	s	II	1							
9	3 BHK + 3 T + Study	42	units	@	2.00	KW		=	84	KW			
10	3 BHK + 4 T + Servant	42	units	@	2.00	KW		=	84	KW			
	TOWER - 35 (B+P+G+18)	Nos o	Nos of Towers		<b>II</b>	1							
11	2 BHK + 2T + Study	38	units	@	1.00	KW		=	38	KW			
12	2 BHK + 2T	38	units	@	1.00	KW		=	38	KW			
	TOWER - 36 (B+P+G+21)	Nos o	Nos of Towers		=	1							
13	3 BHK + 3 T + Study	44	units	@	2.00	KW		=	88	KW			
14	3 BHK + 4 T + Servant	44	units	@	2.00	KW			88	KW			

S.no	Description		No. of unit			Load per Unit			Total Load			
	TOWER - 37 (B+P+G+18)		Nos o	f Tower	s	=	1					
15	3 BHK + 2 T (Large)		76	units	@	2.00	KW		=	152	KW	
	TOWER - 38 (B+P+G+20)		Nos o	f Tower	s	II	1					
16	3 BHK + 2 T (Large)		84	units	@	2.00	KW		=	168	KW	
	TOWER - 39 (B+P+G+22)		Nos o	f Tower	s	=	1					
17	4 BHK + 5 T + Servant		92	units	@	3.00	KW		=	276	KW	
						То	tal Lo	ad	=	2840	KW	
	B	y taking C	Overal	l Divers	sity	factor	100	%	=>	2840	KW	
		E	By tak	ing Pov	ver	factor	0.80		=>	3550	KVA	
	<u>,                                      </u>		Esse	ential L	oad	(A)	=		35	550	KVA	
	COMMON SERVICES - TOW	<u>ERS</u>										
	TOWER - 20, 22, 24, 27 & 32 (B+P+G+22)		Nos of Tower		s	=	5					
18	Elevators (13 Passenger) 1.5	mps	5	nos	@	10.0	KW		=	50	KW	
19	Elevators (16 Passenger) 1.5	mps	5	nos	@	15.0	KW		=	75	KW	
20	Common Lights		5	towers	@	4.0	KW		=	20	KW	
	TOWER - 21 & 23 (B+P+G+22)		Nos o	f Tower	s	=	2					
21	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW		=	20	KW	
22	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW		=	30	KW	
23	Common Lights		2	towers	@	5.0	KW		=	10	KW	
	TOWER - 25 (B+P+G+22)		Nos of Tower		s	=	1					
24	Elevators (13 Passenger) 1.5	mps 1 nos		@	10.0	KW		=	10	KW		
25	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW	
26	Common Lights		1	towers	@	4.0	KW		=	4	KW	

S.no	Description		No. of unit Lo			Load per Unit				Total Load			
	TOWER - 26, 29 & 30 (B+P+G+22)		Nos o	f Tower	s	=	3						
27	Elevators (13 Passenger) 1.5	mps	3	nos	(9)	10.0	KW		=	30	KW		
28	Elevators (16 Passenger) 1.5	mps	3	nos	@	15.0	KW		=	45	KW		
29	Common Lights		3	towers	@	5.0	KW		=	15	KW		
	TOWER - 28 & 31 (B+P+G+22)		Nos o	f Tower	s	=	2						
30	Elevators (13 Passenger) 1.5	mps	2	nos	@	10.0	KW		=	20	KW		
31	Elevators (16 Passenger) 1.5	mps	2	nos	@	15.0	KW		=	30	KW		
32	Common Lights		2	towers	@	4.0	KW		=	8	KW		
	TOWER - 33 (B+P+G+18)		Nos of Towers		s	=	1						
33	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW		
34	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW		
35	Common Lights		1	towers	@	3.0	KW		=	3	KW		
	TOWER - 34 (B+P+G+20)		Nos o	f Tower	s	=	1						
36	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		=	10	KW		
37	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		II	15	KW		
38	Common Lights		1	towers	@	4.0	KW		=	4	KW		
	TOWER - 35 (B+P+G+18)		Nos o	f Tower	s	II	1						
39	Elevators (13 Passenger) 1.5	mps	1	nos	(9)	10.0	KW		=	10	KW		
40	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW		
41	Common Lights		1	towers	@	3.0	KW		=	3	KW		
	TOWER - 36 (B+P+G+21)		Nos of Towers		s	=	1						
42	Elevators (13 Passenger) 1.5	mps 1		nos	@	10.0	KW		=	10	KW		
43	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW		
44	Common Lights		1	towers	@	5.0	KW		=	5	KW		

S.no	Description		No. of unit			Load per Un				Total Load		
	TOWER - 37 (B+P+G+18)		Nos o	f Tower	s	=	1					
45	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		II	10	KW	
46	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW	
47	Common Lights		1	towers	@	3.0	KW		=	3	KW	
	TOWER - 38 (B+P+G+20)		Nos o	f Tower	s	=	1					
48	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		П	10	KW	
49	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW	
50	Common Lights		1	towers	@	4.0	KW		=	4	KW	
	TOWER - 39 (B+P+G+22)		Nos o	f Tower	s	=	1					
51	Elevators (13 Passenger) 1.5	mps	1	nos	@	10.0	KW		П	10	KW	
52	Elevators (16 Passenger) 1.5	mps	1	nos	@	15.0	KW		=	15	KW	
53	Common Lights		1	towers	@	5.0	KW		=	5	KW	
	COMMON SERVICES - Gene	<u>eral</u>										
54	Tube wells / Water Supply Pu	mps							=	200	KW	
55	STP									200	KW	
56	External / Gate / Landscape li	ghting							=	10	KW	
57	Basement lights		37700	sqm	@	1.0	W/sqr	n	=	38	KW	
58	Basement Ventillation								=	300	KW	
59	Commercial etc								=	300	KW	
60	Fire pumps (only jockey pump been considered)	s have	2	set	@	15	KW		=	30	KW	
Total Load											KW	
By taking Overall Diversity factor 50									=>	831	KW	
By taking Power factor 0.80										1040	KVA	
Essential Load ( B ) =									10	)40	KVA	
	Total Essential Loa	d : Phase	-02 (	A + B )	=		4590	K	VA			

Recommended DG Sets at 95% loading = 1 nos 1010 KVA and 2 nos. 750 KVA at 2 different location.

(Total 2 nos 1010 KVA & 4 nos 750 KVA)