Electrical load Calculation - Samridhi Luxuria

At Plot No- SC-02D, Sector - 150, NOIDA

S.no	Description	No. of unit		Load per Unit					Total Load	
SUB HEAD - A (Apartment load)										
	Tower - A & L (B+S/G+13)	**No. of Tower**		**=**	**2**	**nos.**				
1	2B + 2T + STUDY (69 sq M @ 50 W/sqM = 3.47 KW)	52	units	@	3.5	KW		=	180	KW
2	3B + 2T (83 sq M @ 50 W/sqM = 4.14 KW)	28	units	@	4.1	KW		=	116	KW
3	3B + 3T (96 sq M @ 50 W/sqM = 4.78 KW)	28	units	@	4.8	KW		=	134	KW
	Tower - B & K (B+S/G+15)	**No. of Tower**		**=**	**2**	**nos.**				
4	2B + 2T + STUDY (69 sq M @ 50 W/sqM = 3.47 KW)	30	units	@	3.5	KW		=	104	KW
5	3B + 2T (83 sq M @ 50 W/sqM = 4.14 KW)	62	units	@	4.1	KW		=	257	KW
6	3B + 3T (95 sq M @ 50 W/sqM = 4.77 KW)	32	units	@	4.8	KW		=	153	KW
	Tower - C & J (B+S/G+17)	**No. of Tower**		**=**	**2**	**nos.**				
7	2B + 2T + STUDY (69 sq M @ 50 W/sqM = 3.47 KW)	70	units	@	3.5	KW		=	243	KW
8	3B + 2T (83 sq M @ 50 W/sqM = 4.14 KW)	34	units	@	4.1	KW		=	141	KW
9	3B + 3T (95 sq M @ 50 W/sqM = 4.77 KW)	36	units	@	4.8	KW		=	172	KW
	Tower - D & I (B+S/G+19)	**No. of Tower**		**=**	**2**	**nos.**				
10	2B + 2T + STUDY (69 sq M @ 50 W/sqM = 3.47 KW)	78	units	@	3.5	KW		=	270	KW
11	3B + 2T (83 sq M @ 50 W/sqM = 4.14 KW)	38	units	@	4.1	KW		=	157	KW
12	3B + 3T (95 sq M @ 50 W/sqM = 4.77 KW)	40	units	@	4.8	KW		=	191	KW
	Tower - E & H (B+S/G+21)	**No. of Tower**		**=**	**2**	**nos.**				
13	2B + 2T + STUDY (69 sq M @ 50 W/sqM = 3.47 KW)	42	units	@	3.5	KW		=	146	KW

Electrical load Calculation - Samridhi Luxuria

At Plot No- SC-02D, Sector - 150, NOIDA

S.no	Description		No. of unit		Load per Unit				Total Load		
14	3B + 2T (83 sq M @ 50 W/sqM =	4.14 KW)	86	units	@	4.1	KW		=	356	KW
15	3B + 3T (95 sq M @ 50 W/sqM =	4.77 KW)	44	units	@	4.8	KW		=	210	KW
	Tower - F & G (B+S/G+23)		**No. of Tower**		**=**	**2**	**nos.**				
16	2B + 2T + STUDY (69 sq M @ 50 W/sqM =	3.47 KW)	92	units	@	3.5	KW		=	319	KW
17	3B + 2T (83 sq M @ 50 W/sqM =	4.14 KW)	48	units	@	4.1	KW		=	199	KW
18	3B + 3T (95 sq M @ 50 W/sqM =	4.77 KW)	46	units	@	4.8	KW		=	219	KW
							Total Load		**=**	**3566**	**KW**
							By taking Overall Diversity factor	**50 %**	**=>**	**1783**	**KW**
							By taking Power factor	**0.90**	**=>**	**1980**	**KVA**
	Electrical Load A = 1980 KVA										
SUB HEAD - B (COMMON LOAD)											
	COMMON SERVICES - TOWERS										
	Tower - A & L (B+S/G+13)		**No. of Tower**		**=**	**2**	**nos.**				
19	Elevators (13 Passenger) 1.0 mps		4	nos	@	7	KW		=	28	KW
20	Common Lights		2	towers	@	3	KW		=	6	KW
	Tower - B & K (B+S/G+15)		**No. of Tower**		**=**	**2**	**nos.**				
21	Elevators (13 Passenger) 1.5 mps		4	nos	@	12	KW		=	48	KW
22	Common Lights		2	towers	@	3	KW		=	6	KW
	Tower - C & J (B+S/G+17)		**No. of Tower**		**=**	**2**	**nos.**				
23	Elevators (13 Passenger) 1.5 mps		4	nos	@	12	KW		=	48	KW
24	Common Lights		2	towers	@	3	KW		=	6	KW
	Tower - D & I (B+S/G+19)		**No. of Tower**		**=**	**2**	**nos.**				
25	Elevators (13 Passenger) 1.5 mps		4	nos	@	12	KW		=	48	KW
26	Common Lights		2	towers	@	3	KW		=	6	KW

Electrical load Calculation - Samridhi Luxuria

At Plot No- SC-02D, Sector - 150, NOIDA

S.no	Description	No. of unit		Load per Unit				Total Load		
	Tower - E & H (B+S/G+21)	**No. of Tower**		**=**	**2**	**nos.**				
27	Elevators (13 Passenger) 1.75 mps	4	nos	@	12	KW		=	48	KW
28	Common Lights	2	towers	@	3	KW		=	6	KW
	Tower - F & G (B+S/G+23)	**No. of Tower**		**=**	**2**	**nos.**				
29	Elevators (13 Passenger) 1.75 mps	4	nos	@	12	KW		=	48	KW
30	Common Lights	2	towers	@	3	KW		=	6	KW
	COMMON SERVICES - General									
31	Community / Club / Swimming Pool							=	100	KW
32	Tube wells / Water Supply Pumps	1	Job	@	45	KW		=	45	KW
33	Sewage Treatment Plant	1	Job	@	45	KW		=	45	KW
34	External / Gate / Landscape lighting	1	set	@	10	KW		=	10	KW
35	Basement lights	70896	sqm	@	0.7	W/sqm		=	50	KW
36	Basement Ventilation							=	200	KW
37	Commercial							=	90	KW
38	Fire pumps (only jockey pumps have been considered)	2	set	@	15	KW		=	30	KW
					Total Load			**=**	**874**	**KW**
					By taking Overall Diversity factor	**100**	**%**	**=>**	**874**	**KW**
					By taking Power factor	**0.90**		**=>**	**970**	**KVA**

Electrical Load B = 970 KVA

Total Residential Electrical Load A + B => 2950 KVA

Total Electrical Load = 2950 KVA

Recommended Transformer (at 85% loading) = 2 nos 2000 KVA.

Essential Electrical load Calculation - Samridhi Luxuria

At Plot No- SC-02D, Sector - 150, NOIDA

S.no	Description	No. of unit		Load per Unit				Total Load	
SUB HEAD - A (Apartment load)									
	Tower - A & L (B+S/G+13)	**No. of Tower**		**=**	**2**	**nos.**			
1	2B + 2T + STUDY	52	units	@	1.0	KVA	=	52	KVA
2	3B + 2T	28	units	@	3.0	KVA	=	84	KVA
3	3B + 3T	28	units	@	3.0	KVA	=	84	KVA
	Tower - B & K (B+S/G+15)	**No. of Tower**		**=**	**2**	**nos.**			
4	2B + 2T + STUDY	30	units	@	1.0	KVA	=	30	KVA
5	3B + 2T	62	units	@	3.0	KVA	=	186	KVA
6	3B + 3T	32	units	@	3.0	KVA	=	96	KVA
	Tower - C & J (B+S/G+17)	**No. of Tower**		**=**	**2**	**nos.**			
7	2B + 2T + STUDY	70	units	@	1.0	KVA	=	70	KVA
8	3B + 2T	34	units	@	3.0	KVA	=	102	KVA
9	3B + 3T	36	units	@	3.0	KVA	=	108	KVA
	Tower - D & I (B+S/G+19)	**No. of Tower**		**=**	**2**	**nos.**			
10	2B + 2T + STUDY	78	units	@	1.0	KVA	=	78	KVA
11	3B + 2T	38	units	@	3.0	KVA	=	114	KVA
12	3B + 3T	40	units	@	3.0	KVA	=	120	KVA
	Tower - E & H (B+S/G+21)	**No. of Tower**		**=**	**2**	**nos.**			
13	2B + 2T + STUDY	42	units	@	1.0	KVA	=	42	KVA
14	3B + 2T	86	units	@	3.0	KVA	=	258	KVA
15	3B + 3T	44	units	@	3.0	KVA	=	132	KVA
	Tower - F & G (B+S/G+23)	**No. of Tower**		**=**	**2**	**nos.**			
16	2B + 2T + STUDY	92	units	@	1.0	KVA	=	92	KVA
17	3B + 2T	48	units	@	3.0	KVA	=	144	KVA
18	3B + 3T	46	units	@	3.0	KVA	=	138	KVA
						Total Load	**=**	**1930**	**KVA**
						By taking Overall Diversity factor	**80 %**	**=>**	**1544**	**KVA**

Electrical Load A = 1544 KVA

Essential Electrical load Calculation - Samridhi Luxuria

At Plot No- SC-02D, Sector - 150, NOIDA

S.no	Description	No. of unit		Load per Unit				Total Load	
SUB HEAD - B (COMMON LOAD)									
	COMMON SERVICES - TOWERS								
	Tower - A & L (B+S/G+13)	**No. of Tower**		**=**	**2**	**nos.**			
19	Elevators (13 Passenger) 1.0 mps	4	nos	@	7	KW	=	28	KW
20	Common Lights	2	towers	@	3	KW	=	6	KW
	Tower - B & K (B+S/G+15)	**No. of Tower**		**=**	**2**	**nos.**			
21	Elevators (13 Passenger) 1.5 mps	4	nos	@	12	KW	=	48	KW
22	Common Lights	2	towers	@	3	KW	=	6	KW
	Tower - C & J (B+S/G+17)	**No. of Tower**		**=**	**2**	**nos.**			
23	Elevators (13 Passenger) 1.5 mps	4	nos	@	12	KW	=	48	KW
24	Common Lights	2	towers	@	3	KW	=	6	KW
	Tower - D & I (B+S/G+19)	**No. of Tower**		**=**	**2**	**nos.**			
25	Elevators (13 Passenger) 1.5 mps	4	nos	@	12	KW	=	48	KW
26	Common Lights	2	towers	@	3	KW	=	6	KW
	Tower - E & H (B+S/G+21)	**No. of Tower**		**=**	**2**	**nos.**			
27	Elevators (13 Passenger) 1.75 mps	4	nos	@	12	KW	=	48	KW
28	Common Lights	2	towers	@	3	KW	=	6	KW
	Tower - F & G (B+S/G+23)	**No. of Tower**		**=**	**2**	**nos.**			
29	Elevators (13 Passenger) 1.75 mps	4	nos	@	12	KW	=	48	KW
30	Common Lights	2	towers	@	3	KW	=	6	KW
	COMMON SERVICES - General								
31	Community / Club / Swimming Pool						=	100	KW
32	Tube wells / Water Supply Pumps	1	Job	@	45	KW	=	45	KW
33	Sewage Treatment Plant	1	Job	@	45	KW	=	45	KW
34	External / Gate / Landscape lighting	1	set	@	10	KW	=	10	KW
35	Basement lights	70896	sqm	@	0.7	W/sqm	=	50	KW
36	Basement Ventilation						=	200	KW
37	Commercial						=	90	KW

Essential Electrical load Calculation - Samridhi Luxuria

At Plot No- SC-02D, Sector - 150, NOIDA

S.no	Description	No. of unit			Load per Unit			Total Load		
38	Fire pumps (only jockey pumps have been considered)	2	set	@	15	KW		=	30	KW
						Total Load		**=**	**874**	**KW**
						By taking Overall Diversity factor	**50** **%**	**=>**	**437**	**KW**
						By taking Power factor	**0.80**	**=>**	**550**	**KVA**
						Electrical Load B = 550 KVA				
						Total Residential Electrical Load A + B		**=>**	**2094**	**KVA**
						Total Electrical Load = 2094 KVA				

Recommended DG sets (at 85% loading) = 1 nos 1250 KVA & 2 nos 600 KVA.