SUMMARY LOAD SHEET

MULTIPOINT SUPPLY

Sl.no	Subtation with Block	Number of Units	Load in KVA	Selection of Transformer	Emential load in KVA	Selection of DG sets
1	Residential / Commercial	1156	2980	"2 nos 2000 KVA" (33 / 0.433 KV)	3168	1 nos 1250 KVA + 3 nos 750 KVA
2	Common Services		830	"1 nos 1250 KVA" (33 / 0.433 KV)		
Total		1156	3810	KVA	3168	KVA

Electrical Load Calculation

S.no	Description	No. of unit		Load per Unit			Total Load	
A	(RESIDENTIAL LOAD)							
	Tower 1 (2B+G/S+24)	**Nos of Tower**		=	1			
1	3 BHK (Unit-1) (87 sq M @ 50 W/sqM = 3.37 KW)	6	units	@	3.4	KW	=	20 KW
2	3 BHK (Unit-1) (87 sq M @ 50 W/sqM = 3.37 KW)	184	units	@	3.4	KW	=	621 KW
	Tower 2 (2B+G/S+25)	**Nos of Tower**		=	1			
3	3 BHK (Unit-1) (87 sq M @ 50 W/sqM = 3.37 KW)	6	units	@	3.4	KW	=	20 KW
4	3 BHK (Unit-1) (87 sq M @ 50 W/sqM = 3.37 KW)	192	units	@	3.4	KW	=	648 KW
	Tower 3 (3B+G/S+29)	**Nos of Tower**		=	1			
5	3 BHK (Unit-1) (96 sq M @ 50 W/sqM = 4.31 KW)	6	units	@	4.3	KW	=	26 KW
6	3 BHK (Unit-1) (96 sq M @ 50 W/sqM = 4.31 KW)	224	units	@	4.3	KW	=	965 KW
	Tower 4 (2B+G/S+29)	**Nos of Tower**		=	1			
7	3 BHK (Unit-1) (96 sq M @ 50 W/sqM = 4.31 KW)	6	units	@	4.3	KW	=	26 KW
8	3 BHK (Unit-1) (96 sq M @ 50 W/sqM = 4.31 KW)	224	units	@	4.3	KW	=	965 KW
	Tower 5 (2B+G/S+26)	**Nos of Tower**		=	1			
9	4 BHK (Unit-1) (118 sq M @ 50 W/sqM = 5.91 KW)	4	units	@	5.9	KW	=	24 KW
10	4 BHK (Unit-1) (118 sq M @ 50 W/sqM = 5.91 KW)	150	units	@	5.9	KW	=	886 KW
	Tower 6 (2B+G/S+26)	**Nos of Tower**		=	1			
11	4 BHK (Unit-1) (118 sq M @ 50 W/sqM = 5.91 KW)	4	units	@	5.9	KW	=	24 KW
12	4 BHK (Unit-1) (118 sq M @ 50 W/sqM = 5.91 KW)	150	units	@	5.9	KW	=	886 KW
						Total Load (A) =		5108 KW
						By taking Overall Diversity factor	50 % =>	2555 KW
						By taking Power factor	0.80 =>	2840 KVA
						Total Electrical Load (A)		2840 KVA
B	(COMMERCIAL LOAD)							
13	Conv Shopping	1154	Sq Mtr	@	150	w/sqmt	=	173 KW
						Total Load (B) =		173 KW
						By taking Overall Diversity factor	75 % =>	130 KW
						By taking Power factor	0.80 =>	140 KVA
						Total Electrical Load (B)		140 KVA
						Grand Total Electrical Load (A+B)		2980 KVA
						Considering Transformer Loading	80 % =>	3728 KVA
						Recommended Transformer = 2 nos 2000 KVA.		

Common Electrical Load Calculation

S.no	Description	No. of unit		Load per Unit			Total Load	
	(COMMON LOAD)							
	COMMON SERVICES - TOWERS							
	Tower 1 (2B+G/S+24)	**No. of Tower**		=	1	nos.		
1	Elevator 13 Pas (1.75 mps)	5	nos	@	12	KW	=	60 KW
2	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 2 (2B+G/S+25)	**No. of Tower**		=	1	nos.		
3	Elevator 13 Pas (1.75 mps)	5	nos	@	12	KW	=	60 KW
4	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 3 (2B+G/S+29)	**No. of Tower**		=	1	nos.		
5	Elevator 13 Pas (2.0 mps)	5	nos	@	15	KW	=	75 KW
6	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 4 (2B+G/S+29)	**No. of Tower**		=	1	nos.		
7	Elevator 13 Pas (2.0 mps)	5	nos	@	15	KW	=	75 KW
8	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 5 (2B+G/S+26)	**No. of Tower**		=	1	nos.		
9	Elevator 13 Pas (2.0 mps)	4	nos	@	15	KW	=	60 KW
10	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 6 (2B+G/S+26)	**No. of Tower**		=	1	nos.		
11	Elevator 13 Pas (2.0 mps)	4	nos	@	15	KW	=	60 KW
12	Common Lights	1	towers	@	5	KW	=	5 KW

Club / Community Lift

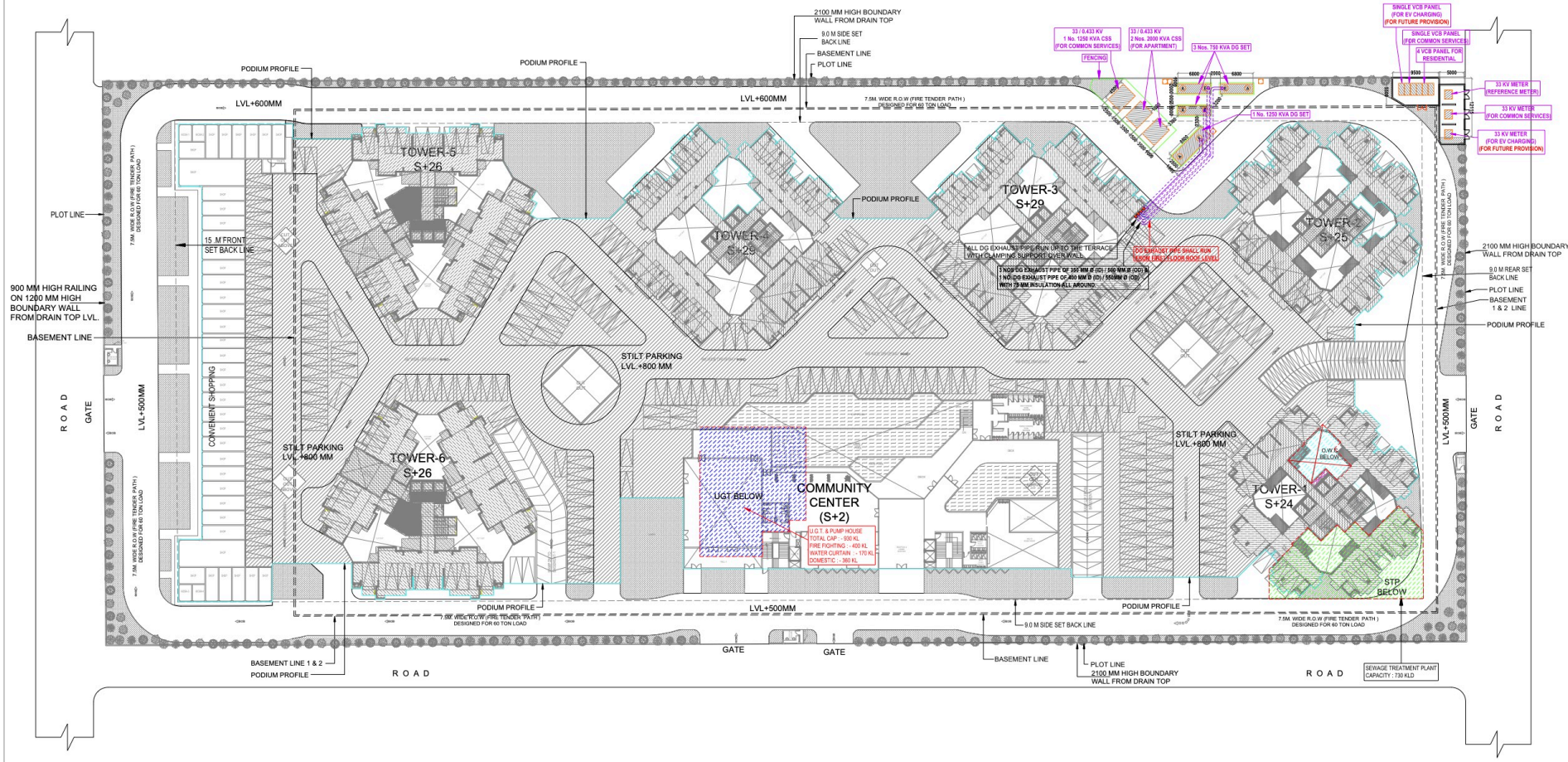
13	Elevator 13 Pas (1.0 mps)	3	nos	@	7	KW	=	21 KW
	COMMON SERVICES - General							
14	Club /Community Hall **(620 Sq Mtr)**						=	90 KW
15	Tube wells/Water Supply Pumps	1	Job	@	70	KW	=	70 KW
16	STP	1	Job	@	70	KW	=	70 KW
17	External / Gate / Landscape lighting	2	Set	@	5	KW	=	10 KW
18	Podium Lighting	14005	Sq Mtr	@	1.0	W/Sq M	=	14 KW
19	Basement Lighting	47896	Sq Mtr	@	1.0	W/Sq M	=	48 KW
20	Basement Ventilation	527	KW	@	30	%	=	158 KW
21	Fire pumps (only jockey pumps have been considered)	2	set	@	15	KW	=	30 KW
						Total Load =		931 KW
						By taking Overall Diversity factor	80 % =>	745 KW
						By taking Power factor	0.80 =>	830 KVA
						Total Electrical Load		830 KVA
						Considering Transformer Loading	80 % =>	1038 KVA
	Recommended Transformer = "1 no 1250 KVA" (33 / 0.433 KV) (Considering Fire Full Load).							

Essential Electrical Load Calculation

S.no	Description	No. of unit		Load per Unit			Total Load	
A	(RESIDENTIAL LOAD)							
	Tower 1 (2B+G/S+24)	**Nos of Tower**		=	1			
1	3 BHK (Unit-1)	6	units	@	3.0	KVA	=	18 KVA
2	3 BHK (Unit-1)	184	units	@	3.0	KVA	=	552 KVA
	Tower 2 (2B+G/S+25)	**Nos of Tower**		=	1			
3	3 BHK (Unit-1)	6	units	@	3.0	KVA	=	18 KVA
4	3 BHK (Unit-1)	192	units	@	3.0	KVA	=	576 KVA
	Tower 3 (3B+G/S+29)	**Nos of Tower**		=	1			
5	3 BHK (Unit-1)	6	units	@	3.0	KVA	=	18 KVA
6	3 BHK (Unit-1)	224	units	@	3.0	KVA	=	672 KVA
	Tower 4 (3B+G/F+29)	**Nos of Tower**		=	1			
7	3 BHK (Unit-1)	6	units	@	3.0	KVA	=	18 KVA
8	3 BHK (Unit-1)	224	units	@	3.0	KVA	=	672 KVA
	Tower 5 (3B+G/S+26)	**Nos of Tower**		=	1			
9	4 BHK (Unit-1)	4	units	@	3.0	KVA	=	12 KVA
10	4 BHK (Unit-1)	150	units	@	3.0	KVA	=	450 KVA
	Tower 6 (2B+G/S+26)	**Nos of Tower**		=	1			
11	4 BHK (Unit-1)	4	units	@	3.0	KVA	=	12 KVA
12	4 BHK (Unit-1)	150	units	@	3.0	KVA	=	450 KVA
						Total Load (A) =		3408 KVA
						By taking Overall Diversity factor	75 % =>	2428 KVA
						Total Essential Load (A)		2428 KVA
B	(COMMERCIAL LOAD)							
13	Conv Shopping	1154	Sq Mtr	@	150	w/sqmt	=	173 KW
						Total Load (B) =		173 KW
						By taking Overall Diversity factor	75 % =>	130 KW
						By taking Power factor	0.80 =>	160 KVA
						Total Electrical Load (B)		160 KVA
C	(COMMON LOAD)							
	COMMON SERVICES - TOWERS							
	Tower 1 (2B+G/S+24)	**No. of Tower**		=	1	nos.		
14	Elevator 13 Pas (1.75 mps)	5	nos	@	12	KW	=	60 KW
15	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 2 (2B+G/S+25)	**No. of Tower**		=	1	nos.		
16	Elevator 13 Pas (1.75 mps)	5	nos	@	12	KW	=	60 KW
17	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 3 (2B+G/S+29)	**No. of Tower**		=	1	nos.		
18	Elevator 13 Pas (2.0 mps)	5	nos	@	15	KW	=	75 KW
19	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 4 (2B+G/S+29)	**No. of Tower**		=	1	nos.		
20	Elevator 13 Pas (2.0 mps)	5	nos	@	15	KW	=	75 KW
21	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 5 (2B+G/S+26)	**No. of Tower**		=	1	nos.		
22	Elevator 13 Pas (2.0 mps)	4	nos	@	15	KW	=	60 KW
23	Common Lights	1	towers	@	5	KW	=	5 KW
	Tower 6 (2B+G/S+26)	**No. of Tower**		=	1	nos.		
24	Elevator 13 Pas (2.0 mps)	4	nos	@	15	KW	=	60 KW
25	Common Lights	1	towers	@	5	KW	=	5 KW

Club / Community Lift

26	Elevator 13 Pas (1.0 mps)	3	nos	@	7	KW	=	21 KW
	COMMON SERVICES - General							
27	Club /Community Hall (620 Sq Mtr)						=	90 KW
28	Tube wells/Water Supply Pumps	1	Job	@	70	KW	=	70 KW
29	STP	1	Job	@	70	KW	=	70 KW
30	External / Gate / Landscape lighting	2	Set	@	5	KW	=	10 KW
31	Podium Lighting	14005	Sq Mtr	@	1.0	W/Sq M	=	14 KW
32	Basement Lighting	47896	Sq Mtr	@	1.0	W/Sq M	=	48 KW
33	Basement Ventilation	527	KW	@	30	%	=	158 KW
34	Fire pumps (only jockey pumps have been considered)	2	set	@	15	KW	=	30 KW
						Total Load =		931 KW
						By taking Overall Diversity factor	50 % =>	465 KW
						By taking Power factor	0.80 =>	580 KVA
						Total Essential Electrical Load (C)		580 KVA
						Total Essential Electrical load (A + B + C)		3168 KVA
						Considering DG Loading	85 % =>	3727 KVA
						Recommended DG set = 1 nos 1250 KVA + 3 nos 750 KVA.		



rev. no.	date	revision
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project
PROPOSED GROUP HOUSING FOR "Pleiades" AT, PLOT NO: - GH-14B, SECTOR- 01, GREATER NOIDA, (U.P.)

title
LAYOUT PLAN

subtitle
ELECTRICAL SETTING-OUT PLAN

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