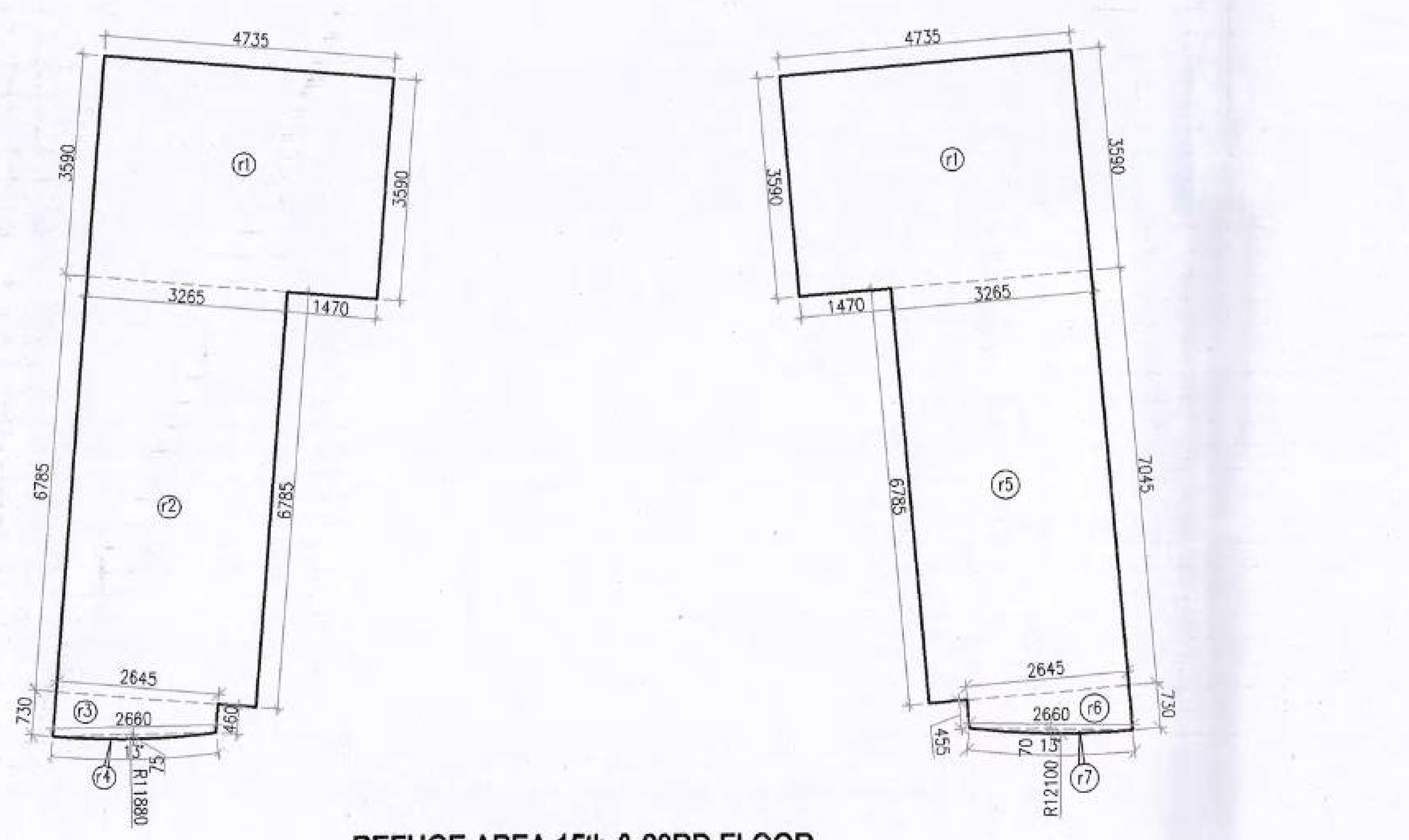
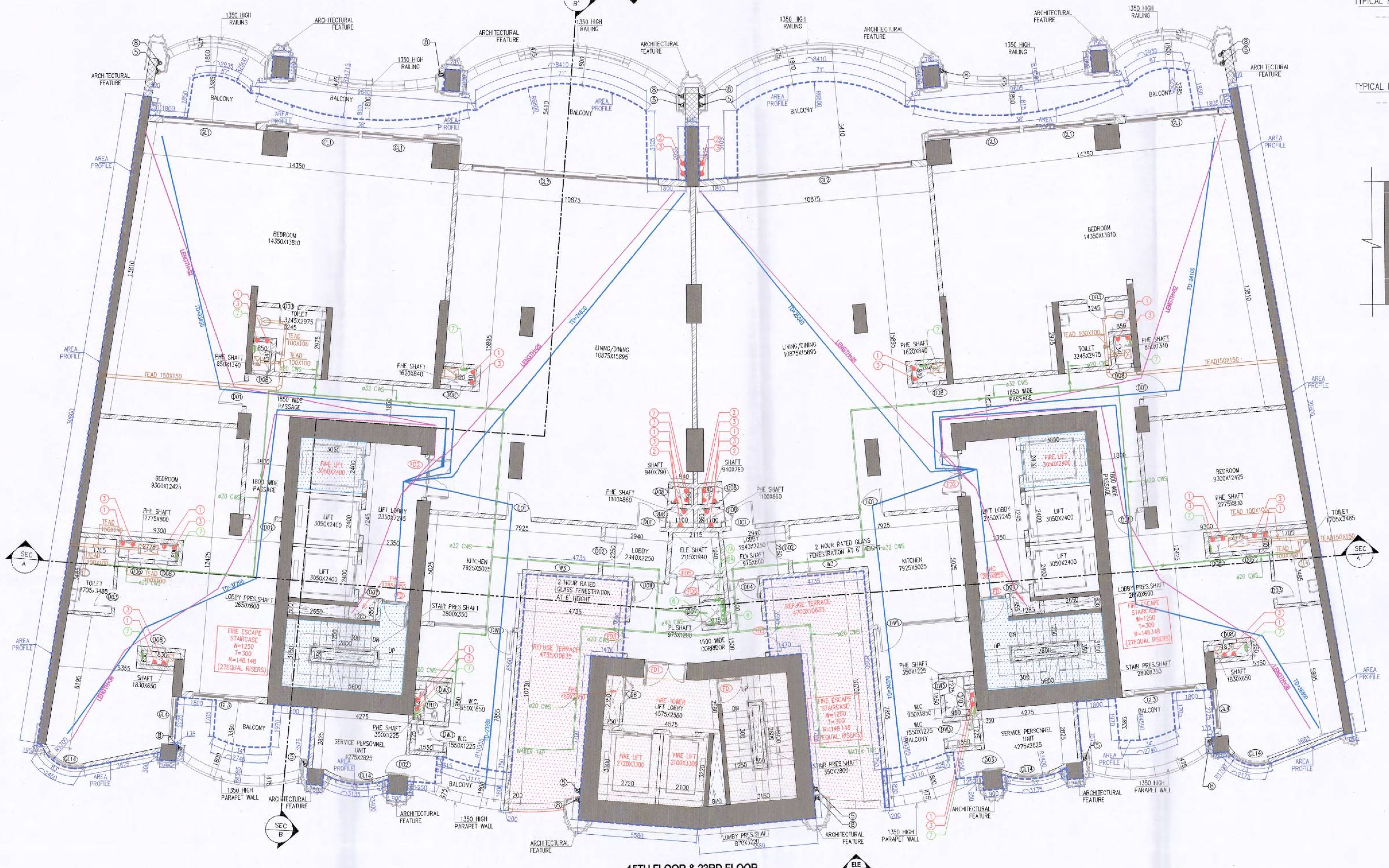


REFUGE AREA 15th & 23RD FLOOR
TOWER-2

GROSS – A								
r1	=	2	X	4.735	X	3.590	=	33.997 SQM
r2	=	1	X	6.785	X	3.265	=	22.153 SQM
r3	=	0.5	X	(0.730+0.460)	X	2.660	=	1.583 SQM
r5	=	0.5	X	(6.785+7.045)	X	3.265	=	22.577 SQM
r6	=	0.5	X	(0.455+0.730)	X	2.660	=	1.576 SQM
						TOTAL	=	81.887 SQM
GROSS AREA OF TYPICAL 16TH OR 24TH FLOOR	=	1587.724	SQM					
GROSS AREA OF REFUGE 15TH OR 23RD FLOOR	=	1488.609	SQM					
TOTAL	=	3076.333	SQM					
REFUGE AREA REQUIRED	=	(3076.333X0.3)/12.5	+	ADDITIONAL SPACE TO ACCOMMODATE ONE WHEEL CHAIR SPACE				
	=	73.832	+	0.9				
	=	74.732	SQM					
REFUGE AREA PROVIDED	=	GROSS-A	+	GROSS-B				
	=	81.887	+	0.521		82.407		SQM

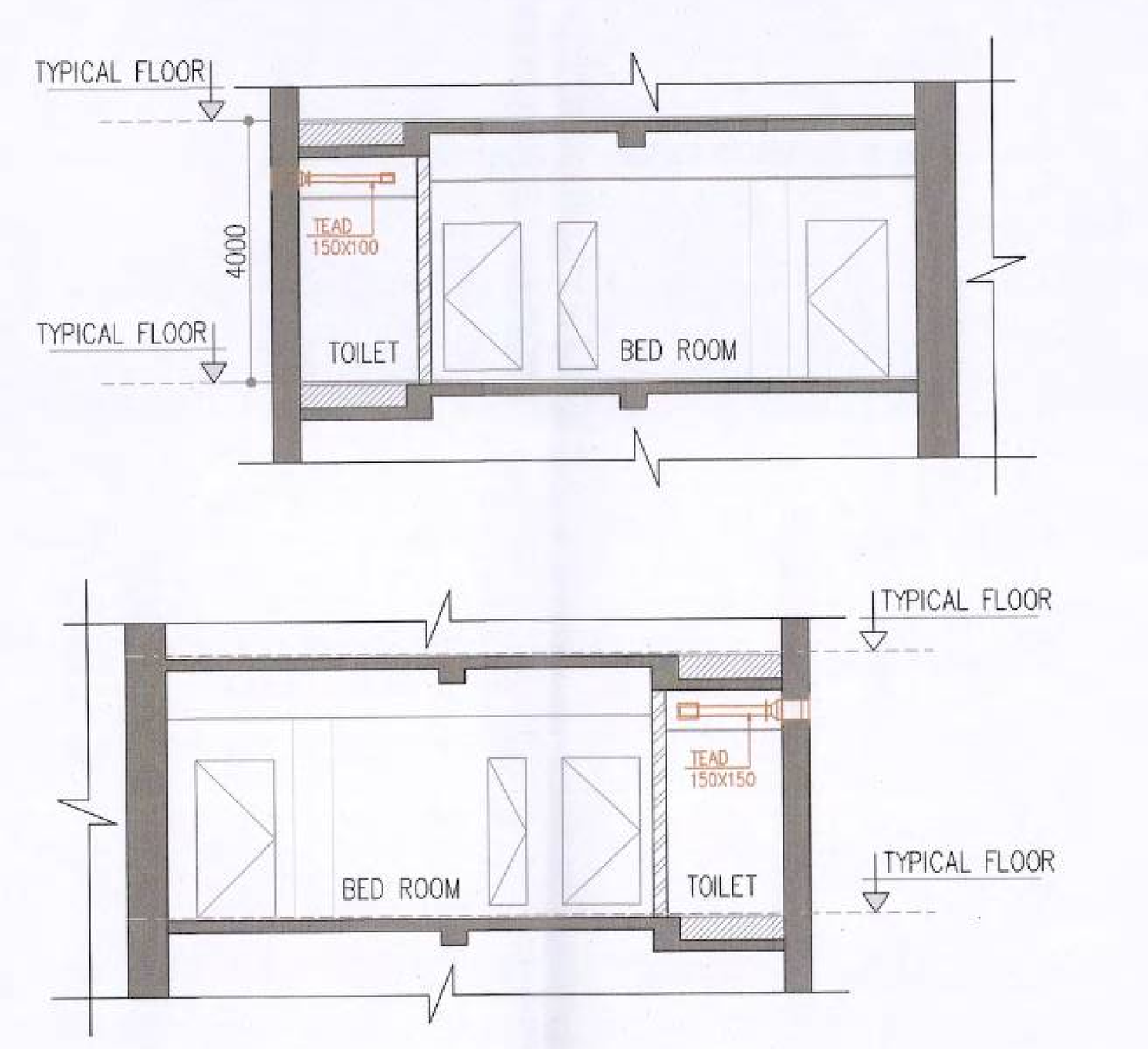
ARC AREA	REFUGE AREA CALCULATION																			
GROSS -B																				
r4	3.14	X	11.880	X	11.880	X	13	/	360	-	0.5	X	11.880	-	0.075	X	2.680	=	0.302	SQM
r7	3.14	X	12.100	X	12.100	X	13	/	360	-	0.5	X	12.100	-	0.070	X	2.660	=	0.218	SQM
																	TOTAL	=	0.521	SQM



15TH FLOOR & 23RD FLOOR
(REFUGE FLOOR)
TOWER-2

FLOOR	FLOOR LEVEL	UNITS	SERVICE PERSONNEL
15th FLOOR(Refuge)	LVL+64.800	2	2
23rd FLOOR(Refuge)	LVL+96.800	2	2
	TOTAL UNITS =	04	04

S. No	Description	Area Sqm	Area ft	Height	ACPH	CFM	Equipment Selection
	Typical Floor						
1	Toilet- Typical floor	5	54	10	10	90	1 No 100 CFM Inline fan



HVAC LEGEND : -
TOILET EXHAUST DUCT

DOOR / WINDOW SCHEDULE (TOWER-2)

DOOR NAME	SIZE	CILL LVL	LINTEL LVL	LOCATION	FIRE RATED
D01	1200 X 2400		2400	BEDROOM ,KITCHEN & PASSAGE	
D02	1000 X 2400		2400	SERVICE PERSONAL/ROOM	
D03	900 X 2400		2400	TOILETS	
D04	1500 X 2700		2700	KITCHEN , SERVICE PASSAGE	
D05	2000 X 2400		2400	STAIRCASE	
D06	1200 X 2300	100 MM	2400	FHC	
D07	900 X 2300	100 MM	2400	ELECTRICAL SHAFT	
D08	600 X 2300	100 MM	2400	PHE SHAFT	
D09	800 X 2300	100 MM	2400	ELV. SHAFT	
D10	1000 X 2300	100 MM	2400	FHC	
FD	1200 X 2700		2700	STAIRCASES	2 HRS
FD1	2000 X 2700		2700	SERVICE CORE LIFT LOBBY	2 HRS
FD2	1800 X 2850		2850	PASSENGER LIFT LOBBY	2 HRS
FD3	1500 X 2700		2700	REFUGE TERRACE	2 HRS
FD4	1200 X 2400		2400	ELE. ROOM (Ground Floor)	2 HRS
FD5	900 X 2100		2100	ELECT SHAFT	2 HRS
DW1	1200/2400 X 2700	1200 MM	2700	KITCHEN – REFUGE	
DW2	1500 X 2500/2700	1200 MM	2700	KITCHEN	
DW3	800X 2400			WC	
W2	1310 X 1500	900 MM	2400	ROOM	
W3	2000 X 900	1800 MM	2700	REFUGE FLOOR	2 HRS

GLAZING SCHEDULE
UPPER GROUND TO 29TH FLOOR

GLAZING NAME	SIZE
GL1	4380 X 3050
GL2	8660 X 3050
GL3	2965 X 3050
GL4	1865 X 3050
GL8	1985 X 4000
GL9	6850 X 4000
GL10	3935 X 4000
GL11	2060 X 4000
GL12	12165 X 4000
GL13	6480 X 4000
GL14	1810 X 2750

LEGEND : -

- (1) 160Ø SOIL & WASTE COMBINE PIPE
- (2) 160Ø WASTE D/T PIPE
- (3) 160Ø ANTISYPHONE PIPE
- (5) 160Ø TERRACE RAIN WATER PIPE
- (6) DOMESTIC WATER SUPPLY DOWNTAKE PIPE
- (7) FLUSHING WATER SUPPLY DOWNTAKE PIPE
- (8) 160Ø BALCONY RAIN WATER PIPE
- (6A) DOMESTIC WATER SUPPLY RISER PIPE
- (7A) FLUSHING WATER SUPPLY RISER PIPE
- KHURRA 650x650MM
- TOILET EXHAUST DUCT

15TH & 23TH TYPICAL REFUGE FLOOR AREA CALCULATION

GROSS – A										
1	0.5	X	4.190	+	4.125	X	0.400	=	1.663	SQM
7	0.5	X	4.225	+	4.055	X	2.005	=	8.301	SQM
8	0.5	X	4.055	+	3.505	X	6.570	=	24.835	SQM
10	0.5	X	3.505	+	3.350	X	1.875	=	6.427	SQM
11	0.5	X	3.350	+	3.255	X	7.885	=	26.040	SQM
13	0.5	X		1.800		X	0.150	=	0.135	SQM
13a	0.5	X		1.800		X	0.150	=	0.135	SQM
14	1	X		0.600		X	2.525	=	1.515	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	7.885	=	28.080	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.885	=	6.466	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	6.545	=	24.756	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	4.225	=	4.257	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.400	=	1.663	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.000	=	1.500	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.000	=	1.570	SQM
[illegible]	[illegible]	X	52.345	[illegible]	58.515	X	18.275	=	1012.983	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.005	=	1.776	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	3.535	=	28.642	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.615	=	4.849	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.750	=	0.563	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.800	=	10.368	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	2.685	=	20.158	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.800	=	11.043	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.750	=	7.363	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	3.025	=	28.548	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.900	=	9.257	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.250	=	12.159	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	8.530	=	0.085	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.395	=	0.932	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.395	=	2.492	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	7.700	=	11.319	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	7.700	=	11.319	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.395	=	0.932	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	3.380	=	28.882	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.800	=	0.720	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	8.530	=	0.085	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.250	=	12.163	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.900	=	9.259	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	3.025	=	28.556	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.750	=	7.363	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.800	=	11.043	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	2.700	=	21.020	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.800	=	10.368	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.555	=	4.794	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.750	=	0.101	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	1.895	=	16.174	SQM
[illegible]	[illegible]	X	[illegible]	[illegible]	[illegible]	X	0.715	=	0.677	SQM
84	0.5	X	7.940	+	7.875	X	0.400	=	3.163	SQM
						TOTAL		=	1464.479	SQM

DEDUCTION AREA

GROSS –B								
a	2	X	0.850	X	1.340	=	2.278	SQM
b	2	X	1.620	X	0.840	=	2.722	SQM
c	2	X	2.775	X	0.800	=	4.440	SQM
d	2	X	1.580	X	0.650	=	2.054	SQM
e	2	X	0.250	X	0.290	=	0.145	SQM
f	6	X	3.050	X	2.400	=	43.920	SQM
g	2	X	2.650	X	0.600	=	3.180	SQM
h	2	X	0.400	X	0.600	=	0.480	SQM
j	2	X	0.935	X	0.655	=	1.225	SQM
k	2	X	0.885	X	0.300	=	0.531	SQM
m	2	X	1.265	X	1.055	=	2.669	SQM
n	2	X	5.600	X	3.150	=	35.280	SQM
p	2	X	0.355	X	1.225	=	0.870	SQM
u	0.5	X	4.780	X	7.300	=	17.447	SQM
x	0.5	X	4.170	X	7.300	=	15.221	SQM
y	1	X	0.975	X	1.200	=	1.170	SQM
z	1	X	0.975	X	0.800	=	0.780	SQM
z1	0.5	X	1.225	X	1.940	=	1.188	SQM
z2	0.5	X	1.225	X	1.940	=	1.188	SQM
z4	0.5	X	0.145	X	0.935	=	0.068	SQM
z7	0.5	X	0.145	X	0.935	=	0.068	SQM
z10	0.5	X	0.940	X	0.785	=	0.369	SQM
z13	0.5	X	0.940	X	0.785	=	0.369	SQM
				TOTAL		=	137.661	SQM

NON FAR AREA

GROSS –D										
m	2	X		1.265		X	1.055	=	2.669	SQM
n	2	X		5.600		X	3.150	=	35.280	SQM
u	0.5	X		4.780		X	7.300	=	17.447	SQM
q	2	X		4.735		X	3.590	=	33.997	SQM
r	0.5	X	7.515	+	7.100	X	3.265	=	23.859	SQM
r1	0.5	X	7.515	+	7.090	X	3.265	=	23.843	SQM
x	0.5	X		4.170		X	7.300	=	15.221	SQM
z1	0.5	X		1.225		X	1.940	=	1.188	SQM
z2	0.5	X		1.225		X	1.940	=	1.188	SQM
						TOTAL		=	154.692	SQM

DEDUCTION AREA

GROSS –E										
d1	1	X		0.750		X	2.350	=	1.763	SQM
d2	1	X		2.720		X	3.300	=	8.976	SQM
d3	1	X		1.830		X	3.300	=	6.039	SQM
d4	0.5	X	3.300	+	3.255	X	0.295	=	0.967	SQM
d5	0.5	X	0.340	+	0.870	X	3.120	=	1.888	SQM
d6	1	X		0.350		X	2.800	=	0.980	SQM
						TOTAL		=	20.612	SQM

TOTAL 15TH & 23TH TYPICAL REFUGE FLOOR ADDITIONAL AREA	=	GROSS – A	+	GROSS – A1	+	GROSS – A2	-	GROSS – A3
	=	1464.479	+	17.945	+	201.590	-	9.145
GROSS – 1	=	1674.869	SQM					

TOTAL 15TH & 23TH TYPICAL REFUGE FLOOR AREA DEDUCTION AREA	=	GROSS – B	+	GROSS – C
	=	137.661	+	37.393
GROSS – 2	=	175.053	SQM	

TOTAL 15TH & 23TH TYPICAL REFUGE FLOOR FAR AREA	=	GROSS – 1	-	GROSS – 2
	=	1674.869	-	175.053
	=	1499.816	SQM	

TOTAL NON FAR AREA OF REFUGE FLOOR AREA	=	GROSS – D	+	GROSS – D1	+	GROSS – D2	-	GROSS – E
	=	154.692	+	0.787	+	34.819	-	20.612
	=	169.687	SQM					
TOTAL BUILTUP AREA OF 15TH & 23TH TYPICAL REFUGE FLOOR	=	FAR AREA	+	NON FAR AREA				
	=	1499.816	+	169.687				
	=	1669.503	SQM					

ARC AREA	AREA CALCULATION (ADDITIONAL)																			
GROSS -A1																				
6	3.14	X	2.500	X	2.500	X	67	/	360	-	0.5	X	2.500	-	0.420	X	2.770	=	0.772	SQM
12	3.14	X	6.800	X	6.800	X	71	/	360	-	0.5	X	6.800	-	1.260	X	7.885	=	6.633	SQM
15	3.14	X	6.800	X	6.800	X	71	/	360	-	0.5	X	6.800	-	1.260	X	7.885	=	6.633	SQM
23	3.14	X	2.505	X	2.505	X	67	/	360	-	0.5	X	2.505	-	0.415	X	2.770	=	0.751	SQM
34	3.14	X	1.700	X	1.700	X	83	/	360	-	0.5	X	1.700	-	0.425	X	2.245	=	0.656	SQM
41	3.14	X	4.585	X	4.585	X	34	/	360	-	0.5	X	4.585	-	0.205	X	2.700	=	0.248	SQM
45	3.14	X	3.400	X	3.400	X	53	/	360	-	0.5	X	3.400	-	0.355	X	3.025	=	0.698	SQM
52	3.14	X	10.425	X	10.425	X	19	/	360	-	0.5	X	10.425	-	0.140	X	3.420	=	0.139	SQM
66	3.14	X	10.350	X	10.350	X	19	/	360	-	0.5	X	10.350	-	0.145	X	3.410	=	-0.021	SQM
71	3.14	X	3.400	X	3.400	X	53	/	360	-	0.5	X	3.400	-	0.355	X	3.025	=	0.738	SQM
75	3.14	X	4.590	X	4.590	X	34	/	360	-	0.5	X	4.590	-	0.205	X	2.700	=	0.255	SQM
79	3.14	X	1.700	X	1.700	X	73	/	360	-	0.5	X	1.700	-	0.335	X	2.030	=	0.445	SQM
																	TOTAL	=	17.945	SQM

ARC AREA	AREA CALCULATION (DEDUCTION) / NON FAR AREA																			
GROSS - D1																				
s	3.14	X	11.985	X	11.985	X	16	/	360	-	0.5	X	11.985	-	0.115	X	3.290	=	0.520	SQM
t	3.14	X	11.835	X	11.835	X	16	/	360	-	0.5	X	11.835	-	0.115	X	3.290	=	0.268	SQM
																	TOTAL	=	0.787	SQM

ARC AREA	AREA CALCULATION (DEDUCTION)																			
GROSS - A3																				
9x	3.14	X	14.715	X	14.715	X	38	/	360	-	0.5	X	14.715	-	0.810	X	9.640	=	4.746	SQM
19x	3.14	X	14.590	X	14.590	X	38	/	360	-	0.5	X	14.590	-	0.815	X	9.605	=	4.400	SQM
																	TOTAL	=	9.145	SQM

ADDITIONAL AREA

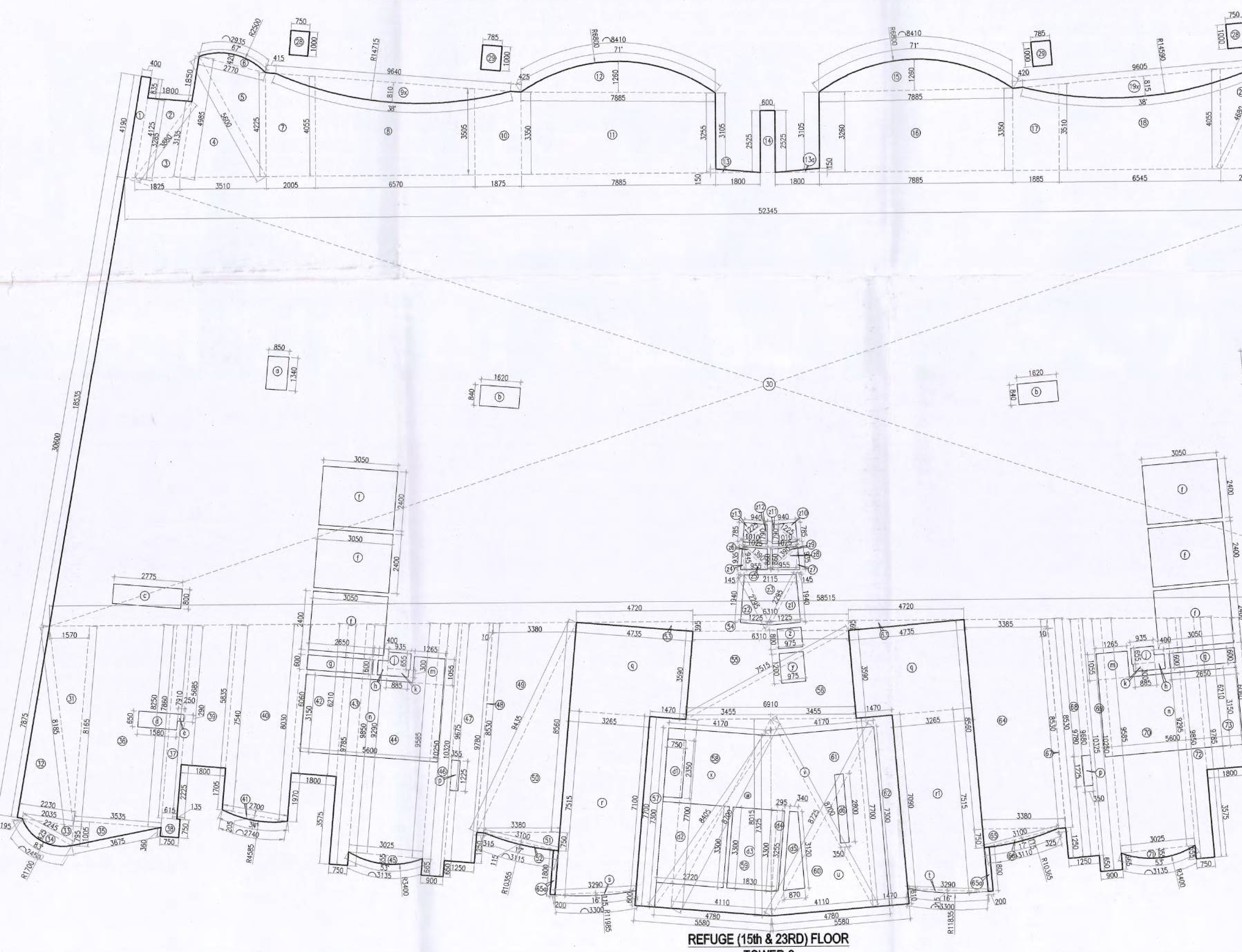
NO.	A		B		C				s	AREA OF = S(S-A)(S-B)(S-C)	Area	
GROSS - A2												
2	1.800	+	3.880	+	3.285	/	2	=	4.4825	8.675	2.945	SQM
3	3.135	+	1.825	+	3.880	/	2	=	4.42	7.959	2.821	SQM
4	3.510	+	4.985	+	5.600	/	2	=	7.0475	74.429	8.627	SQM
5	2.770	+	4.225	+	5.600	/	2	=	6.2975	32.112	5.667	SQM
20	2.025	+	4.680	+	4.055	/	2	=	5.38	16.741	4.092	SQM
22	2.770	+	5.600	+	4.225	/	2	=	6.2975	32.112	5.667	SQM
24	3.510	+	4.985	+	5.600	/	2	=	7.0475	74.429	8.627	SQM
25	1.805	+	3.485	+	3.135	/	2	=	4.2125	7.950	2.820	SQM
26	1.825	+	3.285	+	3.485	/	2	=	4.2975	8.741	2.957	SQM
31	1.570	+	8.165	+	8.185	/	2	=	8.96	40.796	6.387	SQM
32	2.230	+	8.185	+	7.875	/	2	=	9.145	77.099	8.781	SQM
33	2.035	+	0.795	+	2.245	/	2	=	2.5375	0.650	0.806	SQM
49	9.435	+	3.380	+	8.530	/	2	=	10.6725	206.352	14.365	SQM
50	9.440	+	8.560	+	3.380	/	2	=	10.69	208.058	14.424	SQM
51	3.380	+	0.750	+	3.100	/	2	=	3.615	1.253	1.120	SQM
55	6.310	+	7.515	+	3.590	/	2	=	8.7075	127.400	11.287	SQM
56	6.910	+	3.590	+	7.515	/	2	=	9.0075	152.763	12.360	SQM
58	3.455	+	8.700	+	7.700	/	2	=	9.9275	175.692	13.255	SQM
59	4.110	+	8.015	+	8.700	/	2	=	10.4125	269.437	16.415	SQM
60	4.110	+	8.015	+	8.700	/	2	=	10.4125	269.437	16.415	SQM
61	3.455	+	7.700	+	8.700	/	2	=	9.9275	175.692	13.255	SQM
65	3.380	+	3.100	+	0.750	/	2	=	3.615	1.253	1.120	SQM
82	2.870	+	9.375	+	9.170	/	2	=	10.7075	171.929	13.112	SQM
83	3.665	+	7.940	+	9.375	/	2	=	10.49	203.560	14.267	SQM
									TOTAL	=	201.590	SQM

DEDUCTION AREA

NO.	A		B		C				s	AREA OF = S(S-A)(S-B)(S-C)	Area	
GROSS - C												
v	4.170	+	7.325	+	8.725	/	2	=	10.110	231.639	15.220	SQM
w	4.780	+	7.325	+	8.405	/	2	=	10.255	304.340	17.445	SQM
z3	2.115	+	2.295	+	2.295	/	2	=	3.353	4.640	2.154	SQM
z5	0.955	+	0.945	+	1.390	/	2	=	1.645	0.203	0.450	SQM
z6	1.390	+	0.860	+	1.025	/	2	=	1.638	0.193	0.439	SQM
z8	0.955	+	0.945	+	1.390	/	2	=	1.645	0.203	0.450	SQM
z9	1.390	+	0.860	+	1.025	/	2	=	1.638	0.193	0.439	SQM
z11	1.010	+	1.225	+	0.790	/	2	=	1.513	0.158	0.397	SQM
z12	1.010	+	1.225	+	0.790	/	2	=	1.513	0.158	0.397	SQM
									TOTAL	=	37.393	SQM

AREA CALCULATION (DEDUCTION) / NON FAR AREA

NO.	A		B		C				s	AREA OF = S(S-A)(S-B)(S-C)	Area	
GROSS - D2												
v	4.170	+	7.325	+	8.725	/	2	=	10.110	231.639	15.220	SQM
w	4.780	+	7.325	+	8.405	/	2	=	10.255	304.340	17.445	SQM
z3	2.115	+	2.295	+	2.295	/	2	=	3.353	4.640	2.154	SQM
									TOTAL	=	34.819	SQM



REFUGE (15th & 23RD) FLOOR
TOWER-2

NOTES:

- BUILDING WILL BE DESIGNED STRUCTURALLY AS PER RELEVANT IS CODES FOR EARTH QUAKE RESISTANCE.
- BUILDING HAS AUTOMATIC SPRINKLER SYSTEM ON ALL FLOORS.
- THE BUILDING IS FULLY MECHANICALLY VENTILATED & CENTRALLY AIR CONDITIONED WITH 100% POWER BACKUP.
- MSL 249.200 CONSIDERED AS ±00.00.
- ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.

DESIGN CONSULTANT:
RSP
RSP Design Consultants (I) Pvt. Ltd.
RSP UNIT 103 FIRST FLOOR BESTECH BUSINESS TOWER, SOHNA ROAD, SECTOR 48, GURUGRAM, HARYANA 122018

OWNER:
DLF LIMITED
THE SHOPPING MALL,DLF
QUTAB ENCLAVE(PHASE-I)
GURGAON, HARYANA 122002

ASSOCIATE ARCHITECT:
SBA Design N Code LLP
Architecture·Codes·Interiors
(Formerly known as RSMS)
69,Nora Niwas Bhawani Kunj, (Behind D2), Vasant Kunj, New Delhi-110070.
Mob.: 9810791652,9811077209

STRUCTURAL ENGINEER:
LERA CONSULTING STRUCTURAL ENGINEERS (INDIA) PVT LTD
THE RUBY,NORTH WING, FLOOR 23,29
(SENPATI BAPAT MARG, DADAR (W) MUMBAI
MAHARASHTRA INDIA 400 028

MEP CONSULTANT:
ARUP INDIA PRIVATE LIMITED
5TH FLOOR, JET PRIME, NEAR METRO STATION, SUREN ROAD, NEAR OFF.,
WESTERN EXPRESS HIGHWAY, ANDHERI EAST, MUMBAI, MAHARASHTRA INDIA 400 093

TITLE:-
REVISED BUILDING PLAN OF PHASE-R16 (THE DAHLIAS) FALLING IN GROUP HOUSING COLONY OVER AN AREA MEASURING 476.6015 ACRES NAMELY DLF-5 (EARLIER KNOWN AS ZONE-10, DLF CITY PHASE-V) IN SECTOR-42, 43, 53 & 54 GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY DLF LIMITED.

PROJECT:- THE DAHLIAS

This is a "PROVISIONAL BUILDING PLAN" approved only for the purpose of inviting Objections from the general public.
S.T.P (HQ) Member Secretary B.P.A.C.
S.T.P (G) Member B.P.A.C.
S.T.P (Hr.) Chairman B.P.A.C.
ATP(HQ)
DTP(HQ)
JD.
P.A.
A.T.P.
JD(HQ)
JD(T) MEMBER BPAC
TO BE READ WITH THIS OFFICE MEMO NO.: 41383 DATED: 29-10-2025
Checked and found ok for Public Health (Internal) Service only subject to comments in in forwarding letter No. 269370....Dt.14/08/2025

ARCHITECT'S SEAL & SIGNATURE | OWNER'S SEAL & SIGNATURE

Date : JULY.2025 | Scale : 1:100

Drawing Title:- 15th & 23rd REFUGE FLOOR PLAN & AREA CALCULATION TOWER-02

Drawing No:- T2-04

DLF5

03-12082025