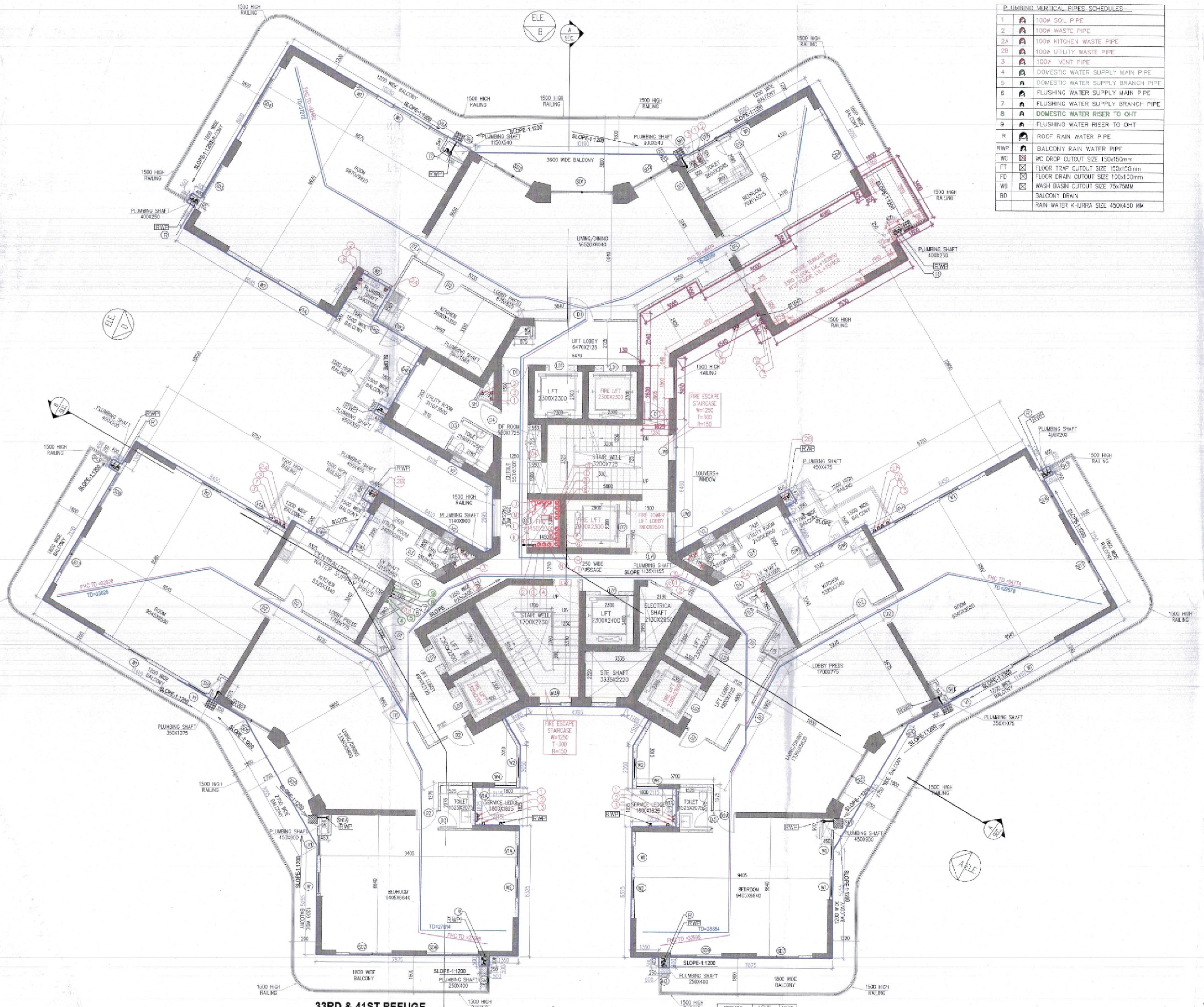


33RD & 41ST REFUGE FLOOR PLAN TOWER-B
NO OF UNIT = 03

REFUGE	LEVEL	UNIT
33RD FLOOR	+122850	03
41ST FLOOR	+151650	03
	TOTAL	06

PLUMBING VERTICAL PIPES SCHEDULES:-

1	100Ø SOIL PIPE
2	100Ø WASTE PIPE
2A	100Ø KITCHEN WASTE PIPE
2B	100Ø UTILITY WASTE PIPE
3	100Ø VENT PIPE
4	DOMESTIC WATER SUPPLY MAIN PIPE
5	DOMESTIC WATER SUPPLY BRANCH PIPE
6	FLUSHING WATER SUPPLY MAIN PIPE
7	FLUSHING WATER SUPPLY BRANCH PIPE
8	DOMESTIC WATER RISER TO OHT
9	FLUSHING WATER RISER TO OHT
R	ROOF RAIN WATER PIPE
RWP	BALCONY RAIN WATER PIPE
WC	WC DROP CUTOUT SIZE 150x150mm
FT	FLOOR TRAP CUTOUT SIZE 150x150mm
FD	FLOOR DRAIN CUTOUT SIZE 100x100mm
WB	WASH BASIN CUTOUT SIZE 75x75MM
BD	BALCONY DRAIN
	RAIN WATER KHURRA SIZE 450X450 MM

FAR AREA OF 33RD & 41ST REFUGE FLOOR CALCULATION

GROSS – A										
1	1	X		0.500		X	0.500	=	0.250	SQM
3	1	X		6.695		X	5.525	=	36.990	SQM
4	1	X		0.350		X	0.525	=	0.184	SQM
5	1	X		5.000		X	0.550	=	2.750	SQM
6	0.5	X	2.210	+	5.020	X	4.785	=	17.298	SQM
7	0.5	X		5.020		X	2.900	=	7.279	SQM
8	0.5	X	7.930	+	5.580	X	1.355	=	9.153	SQM
9	0.5	X	5.580	+	7.045	X	2.540	=	16.034	SQM
10	1	X		7.045		X	6.330	=	44.595	SQM
11	1	X		4.450		X	7.785	=	34.643	SQM
11a	1	X		2.860		X	1.715	=	4.905	SQM
12	1	X		8.545		X	10.260	=	87.672	SQM
13	0.5	X		9.160		X	5.340	=	24.457	SQM
14	0.5	X		5.340		X	3.085	=	8.237	SQM
15	1	X		0.550		X	0.500	=	0.275	SQM
16	1	X		7.125		X	2.600	=	18.525	SQM
17	1	X		8.750		X	8.710	=	76.213	SQM
18	0.5	X	2.405	+	2.195	X	0.355	=	0.817	SQM
19	0.5	X	6.410	+	6.800	X	0.700	=	4.624	SQM
20	1	X		0.425		X	0.215	=	0.091	SQM
21	0.5	X		5.240		X	2.995	=	7.847	SQM
22	0.5	X		1.745		X	2.995	=	2.613	SQM
23	0.5	X	6.985	+	7.835	X	1.415	=	10.485	SQM
24	0.5	X	3.110	+	2.960	X	9.425	=	28.605	SQM
25	2	X		8.450		X	8.900	=	150.410	SQM
26	2	X		0.450		X	0.500	=	0.450	SQM
28	0.5	X		3.545		X	5.950	=	10.546	SQM
29	0.5	X		3.545		X	6.110	=	10.830	SQM
30	0.5	X	9.970	+	8.950	X	0.590	=	5.581	SQM
31	0.5	X	8.950	+	9.710	X	1.310	=	12.222	SQM
32	2	X		9.710		X	2.050	=	39.811	SQM
33	2	X		7.600		X	2.895	=	44.004	SQM
34	2	X		2.075		X	1.070	=	4.441	SQM
35	2	X		9.725		X	5.255	=	102.210	SQM
37	2	X		0.500		X	0.500	=	0.500	SQM
38	0.5	X	8.950	+	9.710	X	1.310	=	12.222	SQM
39	0.5	X	8.950	+	9.970	X	0.590	=	5.581	SQM
40	1	X		24.685		X	5.210	=	128.609	SQM
41	0.5	X		3.525		X	6.105	=	10.760	SQM
42	0.5	X		3.525		X	5.950	=	10.487	SQM
43	0.5	X	2.965	+	3.110	X	9.425	=	28.628	SQM
44	0.5	X	6.880	+	7.740	X	1.440	=	10.555	SQM
45	0.5	X		1.730		X	2.970	=	2.569	SQM
46	0.5	X		5.145		X	2.970	=	7.640	SQM
47	0.5	X	6.305	+	6.710	X	0.700	=	4.555	SQM
48	1	X		0.425		X	0.215	=	0.091	SQM
							TOTAL	=	1047.244	SQM
				DEDUCTION						
GROSS – B										
a1	1	X		0.350		X	0.400	=	0.140	SQM
a2	1	X		0.900		X	0.600	=	0.540	SQM
a3	1	X		1.150		X	0.500	=	0.575	SQM
a3a	1	X		0.600		X	0.100	=	0.060	SQM
a4	1	X		0.400		X	0.250	=	0.100	SQM
a5	0.5	X	0.570	+	0.875	X	0.525	=	0.379	SQM
a6	0.5	X		1.560		X	0.780	=	0.608	SQM
a7	6	X		2.300		X	2.300	=	31.740	SQM
a8	1	X		5.200		X	6.430	=	33.436	SQM
a8a	1	X		0.375		X	6.375	=	2.391	SQM
a9	1	X		0.900		X	3.925	=	3.533	SQM
a10	1	X		1.800		X	0.100	=	0.180	SQM
a11	1	X		0.550		X	1.725	=	0.949	SQM
a12	1	X		0.550		X	1.500	=	0.825	SQM
a13	1	X		1.450		X	2.300	=	3.335	SQM
a14	1	X		0.450		X	0.250	=	0.113	SQM
a14a	1	X		0.450		X	0.475	=	0.214	SQM
a15	0.5	X	0.240	+	0.280	X	0.135	=	0.035	SQM
a16	0.5	X	1.155	+	0.675	X	0.650	=	0.595	SQM
a17	0.5	X	0.190	+	1.240	X	1.765	=	1.262	SQM
a18	0.5	X	1.700	+	1.250	X	0.775	=	1.143	SQM
a19	0.5	X		1.125		X	0.560	=	0.315	SQM
a20	2	X		0.350		X	1.075	=	0.753	SQM
a21	2	X		0.450		X	0.900	=	0.810	SQM
a22	2	X		0.250		X	0.400	=	0.200	SQM
a23	0.5	X	1.700	+	1.255	X	0.775	=	1.145	SQM
a24	0.5	X		1.125		X	0.560	=	0.315	SQM
a25	0.5	X	1.240	+	0.190	X	1.765	=	1.262	SQM
a26	2	X		0.350		X	0.400	=	0.280	SQM
a27	1	X		0.475		X	0.450	=	0.214	SQM
a28	0.5	X	0.280	+	0.235	X	0.135	=	0.035	SQM
a29	0.5	X	0.675	+	1.155	X	0.650	=	0.595	SQM
a30	0.5	X	0.125	+	1.730	X	0.930	=	0.863	SQM
a31	1	X		0.400		X	0.730	=	0.292	SQM
a32	0.5	X	2.130	+	0.850	X	2.220	=	3.219	SQM
a33	1	X		2.300		X	2.400	=	5.520	SQM
a34	0.5	X	3.335	+	2.050	X	2.220	=	5.689	SQM
a35	1	X		1.195		X	0.275	=	0.329	SQM
a38	1	X		2.330		X	5.370	=	12.512	SQM
a39	0.5	X	1.020	+	2.580	X	0.900	=	1.620	SQM
a40	0.5	X		2.580		X	4.470	=	5.766	SQM
							TOTAL	=	123.884	SQM

TOTAL FAR AREA OF 33RD & 41ST REFUGE FLOOR	=	GROSS - A	-	GROSS – B
	=	1047.244	-	123.884
	=	923.360	SQM	

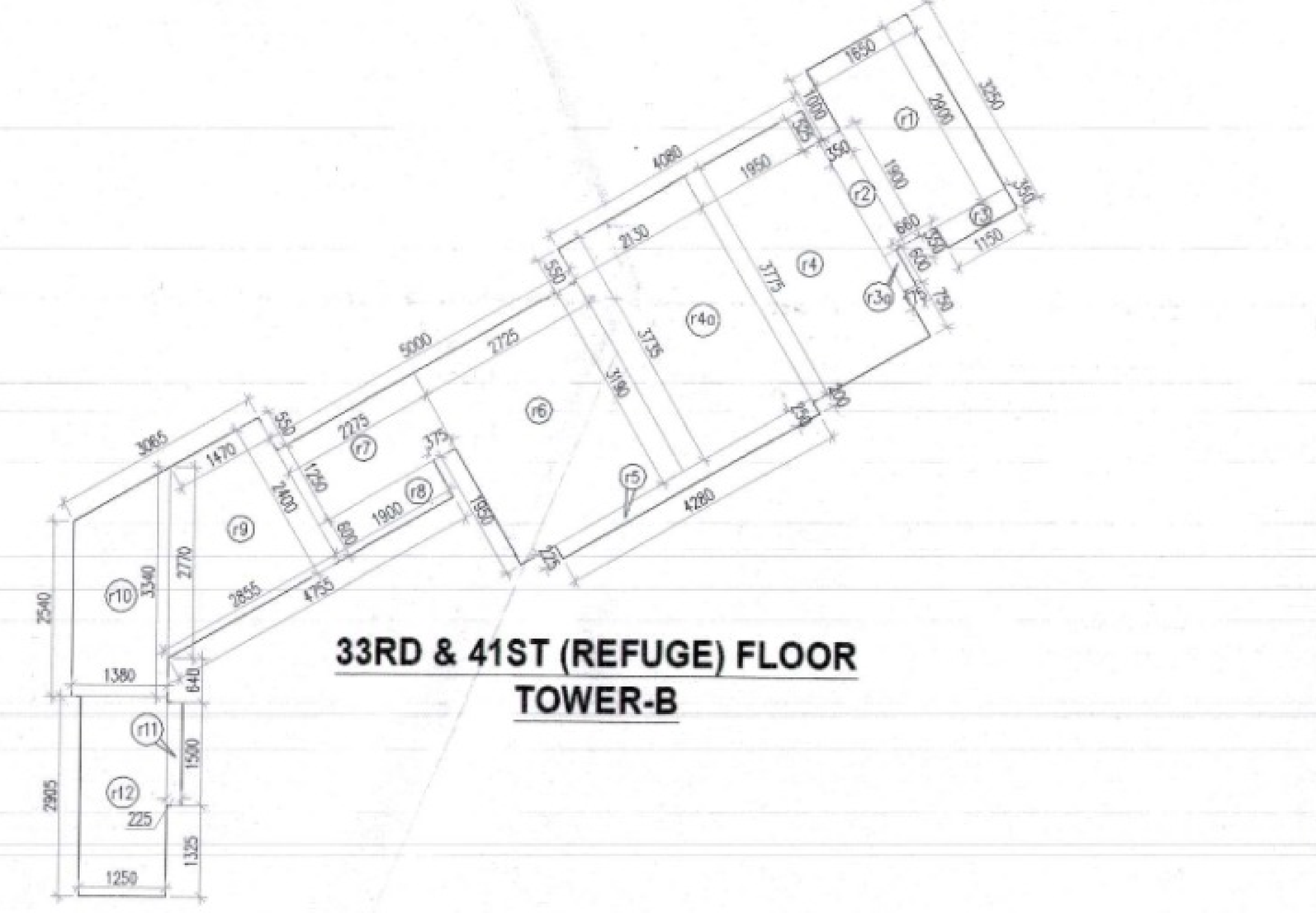
NON FAR AREA (ADDITION)

GROSS – C										
a8	1	X		5.200		X	6.375	=	33.150	SQM
a8a	1	X		0.375		X	6.375	=	2.391	SQM
a9	1	X		0.900		X	3.925	=	3.533	SQM
a10	1	X		1.800		X	0.100	=	0.180	SQM
a38	1	X		2.330		X	5.370	=	12.512	SQM
a39	0.5	X	1.020	+	2.580	X	0.900	=	1.620	SQM
a40	0.5	X		2.580		X	4.470	=	5.766	SQM
a41	1	X		1.800		X	3.400	=	6.120	SQM
a42	0.5	X	0.550	+	0.525	X	4.080	=	2.193	SQM
a43	0.5	X	3.575	+	3.600	X	7.530	=	27.014	SQM
a44	1	X		1.900		X	2.225	=	4.228	SQM
a45	0.5	X	3.065	+	2.640	X	2.775	=	7.916	SQM
a46	0.5	X		1.755		X	2.190	=	1.922	SQM
a47	1	X		1.755		X	0.350	=	0.614	SQM
a48	1	X		1.625		X	2.600	=	4.225	SQM
							TOTAL	=	113.383	SQM

NON FAR AREA (DEDUCTION)

GROSS – D										
x1	1	X		3.200		X	0.725	=	2.320	SQM
x2	1	X		2.900		X	2.300	=	6.670	SQM
x3	0.5	X	1.700	+	1.835	X	0.080	=	0.141	SQM
x4	0.5	X	1.835	+	0.265	X	2.685	=	2.819	SQM
x5	1	X		0.400		X	0.250	=	0.100	SQM
							TOTAL	=	12.051	SQM

TOTAL NON FAR AREA OF 33RD & 41ST REFUGE FLOOR	=	GROSS – C	-	GROSS –D
	=	113.383	-	12.051
	=	101.332	SQM	
TOTAL BUILTUP AREA OF 33RD & 41ST REFUGE FLOOR	=	FAR AREA	+	NON FAR AREA
	=	923.360	+	101.332
	=	1024.692	SQM	



33RD & 41ST (REFUGE) FLOOR TOWER-B

REFUGE AREA CALCULATION 33RD & 41ST REFUGE FLOOR

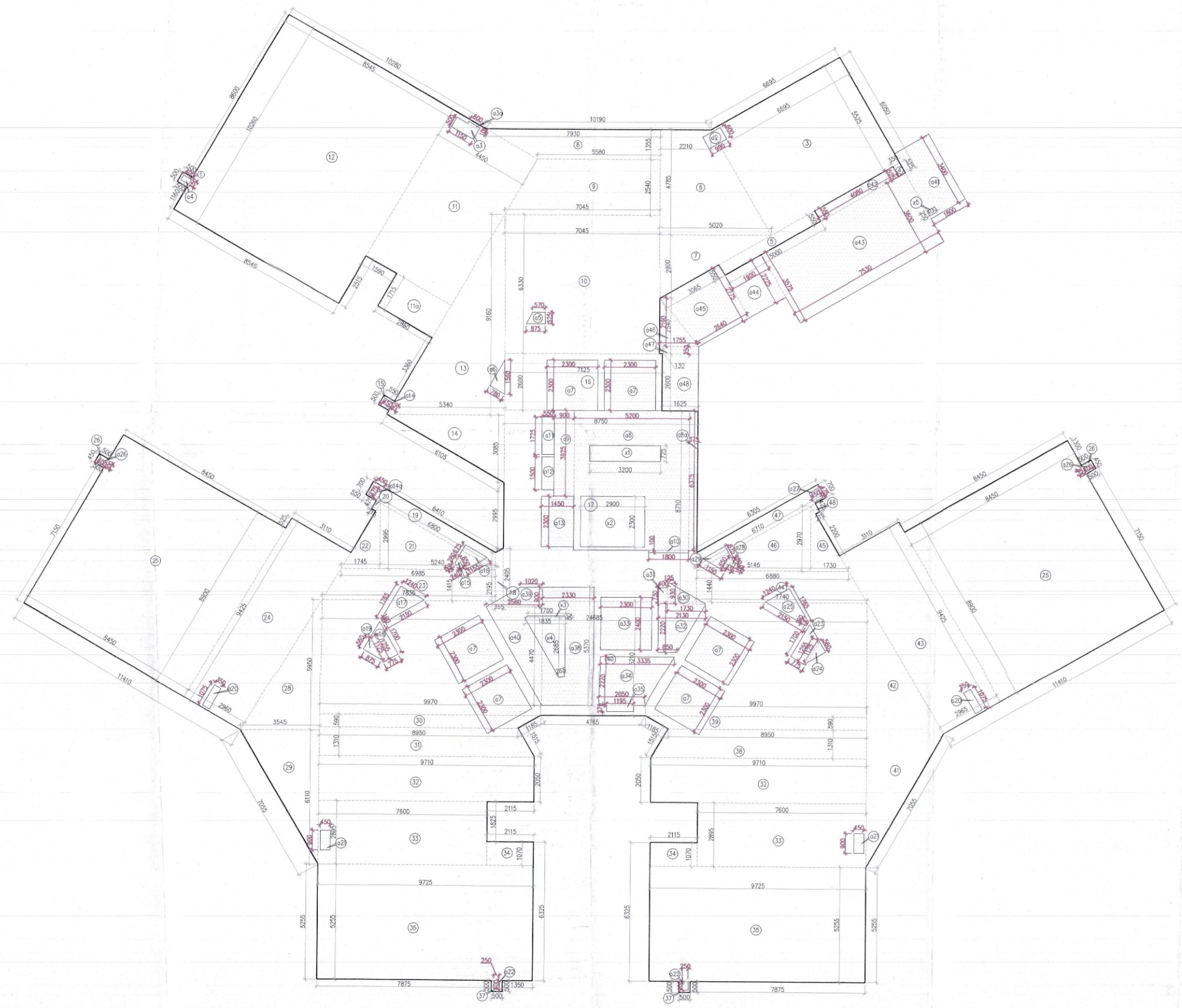
GROSS – A									
r1	=	1	X	1.650	X	2.900	=	4.785	SQM
r2	=	1	X	0.350	X	1.900	=	0.665	SQM
r3	=	1	X	1.150	X	0.350	=	0.403	SQM
r3a	=	1	X	0.175	X	0.600	=	0.105	SQM
r4	=	1	X	1.950	X	3.775	=	7.361	SQM
r4a	=	1	X	2.130	X	3.735	=	7.956	SQM
r5	=	1	X	4.280	X	0.225	=	0.963	SQM
r6	=	1	X	2.725	X	3.190	=	8.693	SQM
r7	=	1	X	2.275	X	1.250	=	2.844	SQM
r8	=	1	X	1.900	X	0.600	=	1.140	SQM
r9	=	0.5	X	(1.470+2.855)	X	2.400	=	5.190	SQM
r10	=	0.5	X	(3.340+2.540)	X	1.380	=	4.057	SQM
r11	=	1	X	0.225	X	1.500	=	0.338	SQM
r12	=	1	X	1.250	X	2.905	=	3.631	SQM
						TOTAL	=	48.130	SQM

TOTAL REFUGE AREA	=	GROSS – A	
	=	48.130	
	=	48.130	SQM
GROSS AREA OF 33RD & 41ST FLOOR (REFUGE)	=	959.305	SQM
GROSS AREA OF TYPICAL FLOOR	=	1005.652	SQM
TOTAL	=	1964.957	SQM

TOTAL NO. OF OCCUPANTS	=	GROSS AREA	/	OCCUPANT FACTOR		
	=	1964.957	/	12.5	=	157 PERSONS
REFUGE AREA REQUIRED	=	0.3 SQM. PER PERSON	+	0.9 SQM. ADDITIONAL SPAE TO ACCOMMODATE WHEEL CHAIR SPACE FOR EVERY 200 PERSON POPULATION OR PART THEREOF		
	=	0.3	X	157	+	0.9
	=	47.100			+	0.9
	=	48.000	SQM.			
PROPOSED REFUGE AREA	=	48.130	SQM.			

MAX ESTATES - TYPICAL & REFUGE

Tag		Width (MM)	Height (MM)	Sill (MM)	Lintel (MM)	DOOR TYPE	OPENING TYPE	LOCATION
						SCHEDULE OF NON FIRE RATED DOORS		
D2		1050	2450	0	2450	WOODEN FLUSH DOOR	SINGLE LEAF DOOR	BEDROOMS
D2A		1050	2450	0	2450	WOODEN FLUSH DOOR (SUBFRAME)	SINGLE LEAF DOOR	BEDROOMS
D3		850	2450	0	2450	WOODEN FLUSH DOOR	SINGLE LEAF DOOR	TOILETS ENTRANCE
						SCHEDULE OF WINDOWS		
W1A		1000	2150	600	2750	FIXED WINDOW / OPENABLE	FIXED PANEL/ OPENABLE + GLASS	TOILET
W1		1000	2150	600	2750	FIXED WINDOW / OPENABLE	FIXED PANEL/ OPENABLE + GLASS	MAIN / CLEAR FAÇADE
W2		1000	1850	900	2750	FIXED WINDOW / OPENABLE	FIXED PANEL/ OPENABLE + GLASS	BACK FAÇADE
W3A		1000	1850	900	2750	FIXED WINDOW / OPENABLE	FIXED PANEL/ OPENABLE + GLASS	STAIRCASE 2
W4		1050	1850	900	2750	OPENABLE	OPENABLE + GLASS	STUDY
						SCHEDULE OF SLIDING DOORS		
SD1		2965	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	LIVING AREA
SD2		2000	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	DINING AREA
SD3		1800	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	MASTER BEDROOM
SD4		2700	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	BEDROOM2
SD5		2850	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	LIVING AREA
SD6		2265	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	DINING AREA
SD7		2050	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	MASTER BEDROOM
SD8		1765	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	BEDROOM2
SD9		2480	2750	0	2750	SLIDING DOOR, ALUMINIUM + GLASS	SLIDING PANEL	BEDROOM4
						SCHEDULE OF EXTERNAL DOOR/ WINDOWS & VENTILATORS		
DW1	DOOR	1050	2750	0	2750	HINGED GLASS DOOR / WINDOW	SINGLE SHUTTER DOOR, OPENABLE OUTSIDE + FIXED WINDOW	KITCHEN/UTILITY ROOM
	WINDOW	650	2150	600	2750			
DW2	WINDOW	650	1850	900	2750	HINGED GLASS DOOR / WINDOW	SINGLE SHUTTER DOOR, OPENABLE OUTSIDE + FIXED WINDOW	KITCHEN/UTILITY ROOM
	DOOR	1050	2750	0	2750			
DW3	DOOR	1000	2750	0	2750	HINGED GLASS DOOR / WINDOW	SINGLE SHUTTER DOOR, OPENABLE OUTSIDE + FIXED WINDOW	KITCHEN/UTILITY ROOM
	WINDOW	850	2150	600	2750			
						SCHEDULE OFSHAFTS		
SH1		600	2300	150	2450	HINGED GLASS DOOR	SINGLE SHUTTER DOOR	TOILET
SH2		1000	2300	150	2450	HINGED GLASS DOOR	SINGLE SHUTTER DOOR	CORIDOR
						SCHEDULE OF VENTILATORS		
V1		1000	1850	600	2450	OPENABLE	OPENABLE GLASS PANEL	TOILET
V1A		1000	1550	900	2450	OPENABLE	OPENABLE GLASS PANEL	TOILET
V2		600	1550	900	2450	OPENABLE	OPENABLE GLASS PANEL	TOILET
						SCHEDULE OF FIRE RATED DOOR		
D1		1250	2750	0	2750	WOODEN FLUSH DOOR (MIN. 2HR. FIRE RATING)	SINGLE LEAF DOOR	UNIT ENTRANCE
D4		1050	2750	0	2750	WOODEN FLUSH DOOR (MIN. 2HR. FIRE RATING)	SINGLE LEAF DOOR	UTILITY ROOM
FD2		900	2300	150	2450	METAL DOOR WITH VISION PANEL (MIN. 2HR. FIRE RATING)	SINGLE SHUTTER, OPENABLE OUTSIDE	ELECTRICAL SHAFT
FD3		900	2300	150	2450	METAL FIRE DOOR (MIN. 2HR. FIRE RATING)	SINGLE SHUTTER, OPENABLE OUTSIDE	LV SHAFT
FD4		1500	2300	150	2450	METAL FIRE DOOR (MIN. 2HR. FIRE RATING)	SINGLE SHUTTER, OPENABLE OUTSIDE	IDF ROOM
						SCHEDULE OF GLASS DOOR		
GD1		900	2300	150	2450	SINGLE SHUTTER, OPENABLE INSIDE	GLASS DOOR AS SPEC	FHC
						SCHEDULE OF LOUVERED DOOR		
LV1		1800	2450	0	2450	LOUVERED DOOR	DOUBLE SHUTTER, OPENABLE INSIDE	FIRE STAIRCASE LOBBY
LV2		1250	2450	0	2450	LOUVERED DOOR	SINGLE SHUTTER, OPENABLE INSIDE	STAIRCASE 02
LV3		775	2300	150	2450	LOUVERED DOOR	SINGLE SHUTTER, OPENABLE INSIDE	LOBBY PRESSURISATION
						SCHEDULE OF LOUVERED DOOR-WINDOW		
LW1	LOUVERS	1275	2450	0	2450	HINGED GLASS + LOUVER / WINDOW	DOUBLE SHUTTER, OPENABLE OUTSIDE	FIRE STAIRCASE LOBBY
	WINDOW	1175	1550	900	2450			
						SCHEDULE OF LIFT OPENINGS		
LD1		900	2450	0	2450		AS PER VENDOR/ VT	LIFTS
LD2		1000	2450	0	2450		AS PER VENDOR/ VT	LIFTS



REFUGE (33RD & 41ST) FLOOR

SANCTIONED
TO BE READ WITH THIS OFFICE
MEMO NO.:
DATED :

Note :-

1. BUILDING HAS AUTOMATIC SPRINKLER SYSTEM WHEREVER REQUIRED BY NBC.
2. BUILDING WILL BE DESIGNED (STRUCTURES) AS PER RELEVENT IS CODES FOR EARTH QUAKE RESISTANCE.
3. ALL TOILET & KITCHEN HAVE PERMANENT VENTILATION /EXHAUST
4. ALL BUILDINGS ARE NATURALLY VENTILATED AND WHERE EVER REQUIRED MECHANICAL VENTILATION IS PROPOSED WITH 100% POWER BACKUP.

Project

PROPOSED BUILDING PLAN OF GROUP HOUSING COLONY FOR PHASE 3 AREA MEASURING 8.19375 ACRES PART OF TOTAL LICENSED LAND MEASURING 34.175 ACRES(LICENCE NO. 16 OF 2008 DATED 31.01.2008, LICENCE NO. 28 OF 2008 DATED 17.02.2008, LICENCE NO. 44 OF 2011 DATED 13.05.2011) IN SECTOR-59 GURUGRAM MANESAR URBAN COMPLEX BEING DEVELOPED BY BTVS BUILDWELL PVT LTD. AND OTHERS IN COLLABORATION WITH BASE EXPORTS PVT LTD. AND BUZZ HOTELS PVT. LTD.

Architects:

Morphogenesis
Plot No. 41, Industrial Estate,
Okhla Phase-III,
New Delhi 110020, India
TEL: +91 11 41828070
FAX: 91 11 26490351
E Mail:studio@morphogenesis.org

Associate Architects:

SBA Design N Code LLP
Architecture·Codes·Interiors

SBA Design N Code LLP
Architecture·Codes·Interiors
(Formerly known as RSMS)
Plot no. 10 A&B, Bhawani Kunj,
Behind D2,Vasant Kunj,
New Delhi-110070.
Mob.: 9810791652,9811077209

S.T.P.(HQ) Member Secretary B.P.A.C. — S.T.P.(HR) Member B.P.A.C. — C.T.P.(HR) Chairman B.P.A.C.
DTP(HQ) — ATP(HQ)
JD. — ATP
A.O.(HQ) Member BPAC — FSO. (HQ) Member BPAC
DINESH KUMAR PA(HQ)

OWNER'S SEAL & SIGNATURE

Base Exports Private Limited — BUZZ HOTELS PVT. LTD.

BIP HOLDER SEAL & SIGNATURE — Base Buildwell Private Limited

ARCHITECT'S SEAL & SIGNATURE — REENA SHARMA B.ARCH CA/2016/77247 — MORPHOGENESIS

JUL 2026 — Checked and found ok for Public Health ... — Scale :- 1:100

Drawing Title:- 33rd & 41ST REFUGE FLOOR PLAN & AREA CALCULATION (TOWER-B)

Superintending Engineer (HQ) HSVP

Drawing No:- TB-11

03-20072026