

# ELECTRICAL LOAD ESTIMATION

Project : WESTSIDE  
Location : UTOPIA BORIVALI

Date : 06.12.2021  
Rev : R01

	Description	Info input	CONNECTED LOAD (kW)	DEMAND FACTOR	DEMAND LOAD (kW)
	<b>TOTAL AREA</b>	<b>28,193.00</b>			
<b>A</b>	<b>Ltg. Load</b>				
1	Lighting Load		61.46	1.00	61.46
<b>B</b>	<b>Power Load</b>				
1	Power load 1kw/ 2000sft		14.10	0.60	8.46
2	Computer load & cash tills		3.40	1.00	3.40
3	Iron Machine/ Steamer		6.00	0.80	4.80
4	Escalator (4 Nos.)		30.00	0.80	24.00
5	Lift (0 Nos.)		0.00	0.80	0.00
6	Sensomatic		0.10	0.80	0.08
7	Toilet Ventilation		1.00	0.80	0.80
8	Signages + Branding		4.00	1.00	4.00
	<b>Total Lighting Power Load</b>		<b>120.06</b>		<b>107.00</b>
	<b>HVAC Load</b>				
<b>A</b>	<b>HVAC load</b>				
1	6TR INV DSU x 3 Nos. (1GF+1FF+1SF)		22.05	0.90	19.85
2	8.75 TR DSU x 5 Nos. (2GF+2FF+1SF)		54.00	0.90	48.60
3	9TR INVR DSU x 6 Nos. (2GF+2FF+2SF)		64.80	0.90	58.32
4	11TR DSU x 3 Nos. (2GF+1SF)		45.00	0.90	40.50
5	17TR DSU x 3 Nos. (1FF+2SF)		63.75	0.90	57.38
6	1TR SPLIT UNIT		1.50	0.00	0.00
<b>B</b>	<b>Miscellaneous</b>		2.00	0.60	1.20
	<b>Total Load (HVAC)</b>		<b>253.10</b>		<b>225.84</b>
	<b>Total load</b>		<b>373.16</b>		<b>332.84</b>

## EB requirement

Total Connected Load **373** KW  
Maximum demand load **333** KW  
Maximum demand load in KVA @ 0.9 PF **370** KVA

<b>Recommended load from Electricity Board</b>	<b>370</b>	<b>KVA</b>
	<b>333</b>	<b>KW</b>

## DG Requirement

Total connected load **373** KW  
Maximum demand load **333** KW  
Maximum demand load in KVA @ 0.8 PF **416** KVA

**Recommended 500 KVA DG with AMF and Autochangeover facility**

## Main Supply Cable & Breaker

Breaker Capacity : 800 Amp TPN MCCB  
Cable Specs :3 Runs x 3.5C x 300 Sq.mm A2XFY Cable  
Body Earthing Specs : 2Runs x 25 X 6 GI/CU strip  
Nuetral Earthing UPS Specs : 2Runs x 25 X 3 CU strip

## HVAC Supply Cable & Breaker

Breaker Capacity : 630 Amp TPN MCCB  
Cable Specs :2 Runs x 3.5C x 300 Sq.mm A2XFY Cable  
Body Earthing Specs : 2Runs x 25 X 6 GI/CU strip  
Nuetral Earthing UPS Specs : 2Runs x 25 X 3 CU strip

## DG Supply Cable & Earthing

Cable Specs :3 Runs x 3.5C x 300 Sq.mm A2XFY Cable  
Body Earthing 2 Eathing Pits GI - Specs : 2 Runs x 25 X 6 GI strip  
Nuetral Earthing 2 Eathing Pits CU - Specs : 2 Runs x 25 X 6 CU strip  
DG Panel to Changeover Panel 2 Runs 16 Core 2.5sqmm cable, Approx length 20 meter