“NEW PWD Rest House” Building at Hisar

ECBC Compliance Report

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Summary

Whole Building Performance Method has been used to show compliance of project with ECBC.

Input Parameter	Baseline	Proposed	Units
Wall material	As per ECBC	200 mm AAC Block	
Wall U-value	0.0704	0.119	Btu/hrsqft F
Roof material	As per ECBC	11 mm clay tiles + 115 mm RCC + 25 mm XPS +25 mm PUF + 50 mm Wood	
Roof U-value	0.058	0.090	Btu/hrsqft F
Glazing U Value	0.53	0.264	Btu/hrsqft F
SHGC	0.27	0.27	
Window Shading	No	As per Architectural Drawings	
Cooling Sizing Ratio	1.15	1	
Heating Sizing Ratio	1.25	1	
HVAC System	VRF with DOAS sys	VRF with DOAS sys	
HVAC System Efficiency (EER)	3.02	3.5	
Lighting Power Density calculation (As per space function method- ECBC §6.3.2)			
Internal	0.91	0.71	W/ ft^2
External	0.88	0.79	W/ ft^2
Zone Cooling set point	75	75	deg F
Zone Heating set point	70	70	deg F

Project achieves energy saving of 5.3% when compared with ECBC baseline case. Thereby, project is meeting the ECBC compliance by 'Whole Building Performance' approach.

Description	Energy Consumption/ Generation
Proposed case energy consumption (kWh)	**1662696**
Base case energy consumption (kWh)	**1913533**
Savings %	**13.1%**
Base case EPI (kWh/Sq.m./Annum)	**140.8**
Proposed case EPI (kWh/Sq.m./Annum)	**122.4**
EPI ratio	**0.9**

Introduction

NEW PWD Rest House" Building at Hisar, with the approved drawing, having three blocks is to be constructed. It's having one block hospitality type, one block mixed-type and one block falling under shopping mall (strip retail) type which is under composite climate zone.

Building Floor Plan

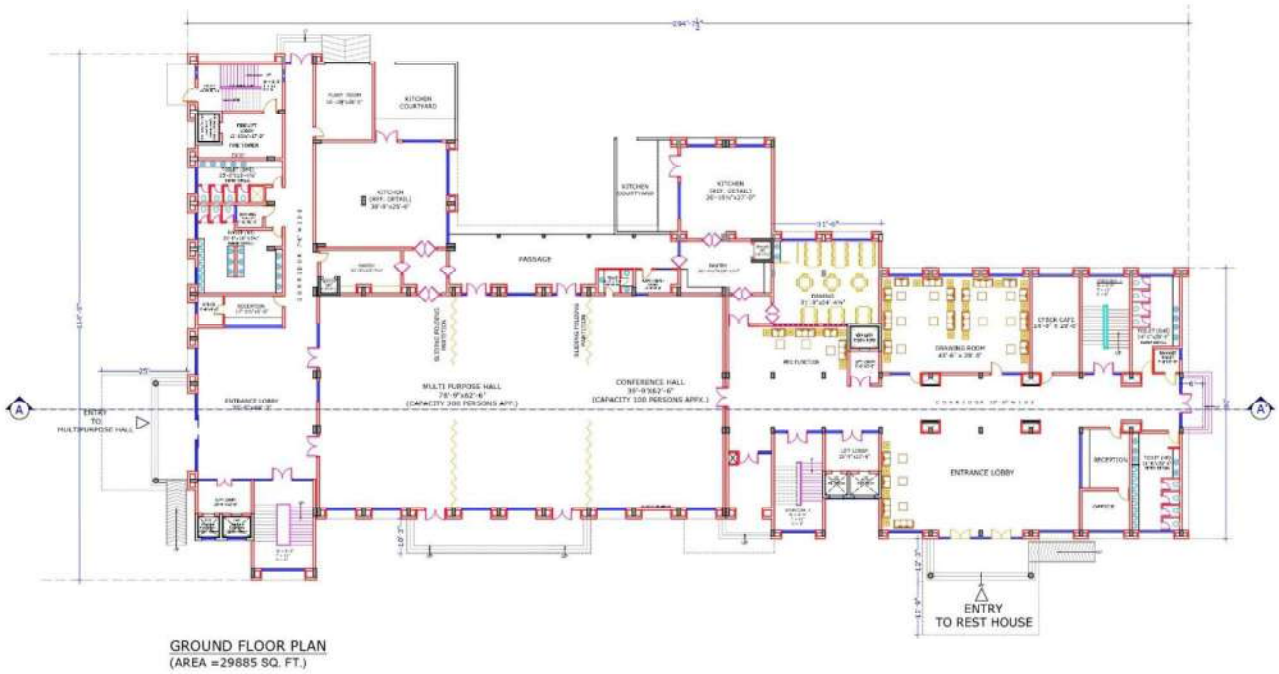

Figure 1: Ground Floor plan

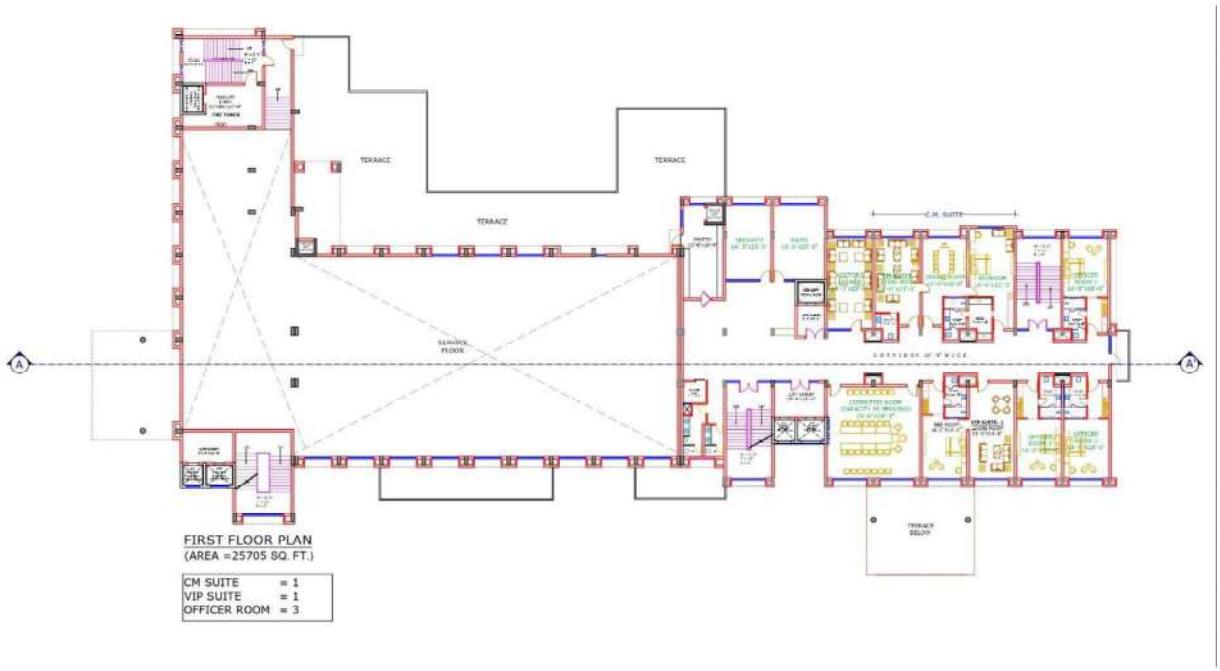

Figure 2: First floor plan

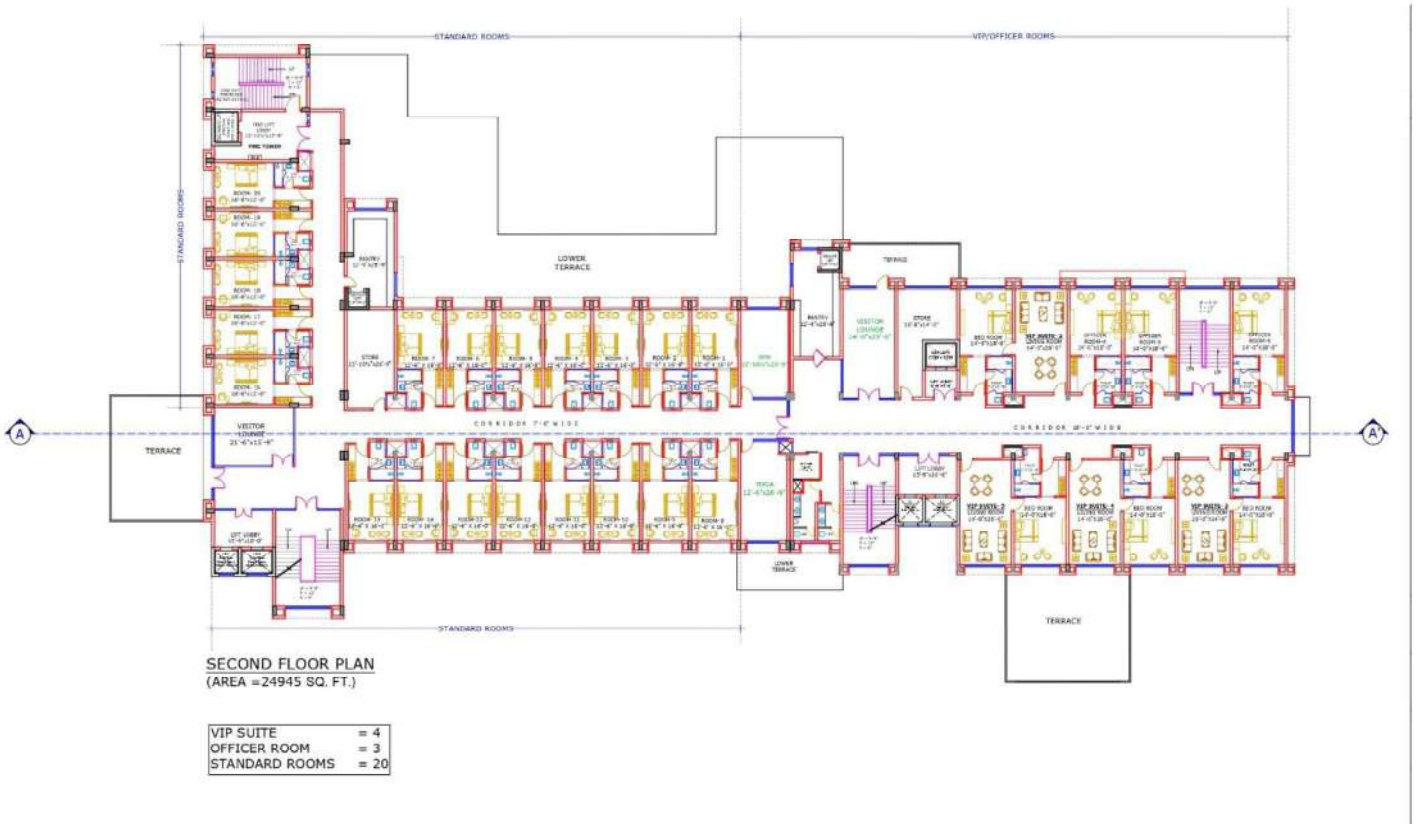

Figure 3: Second floor plan

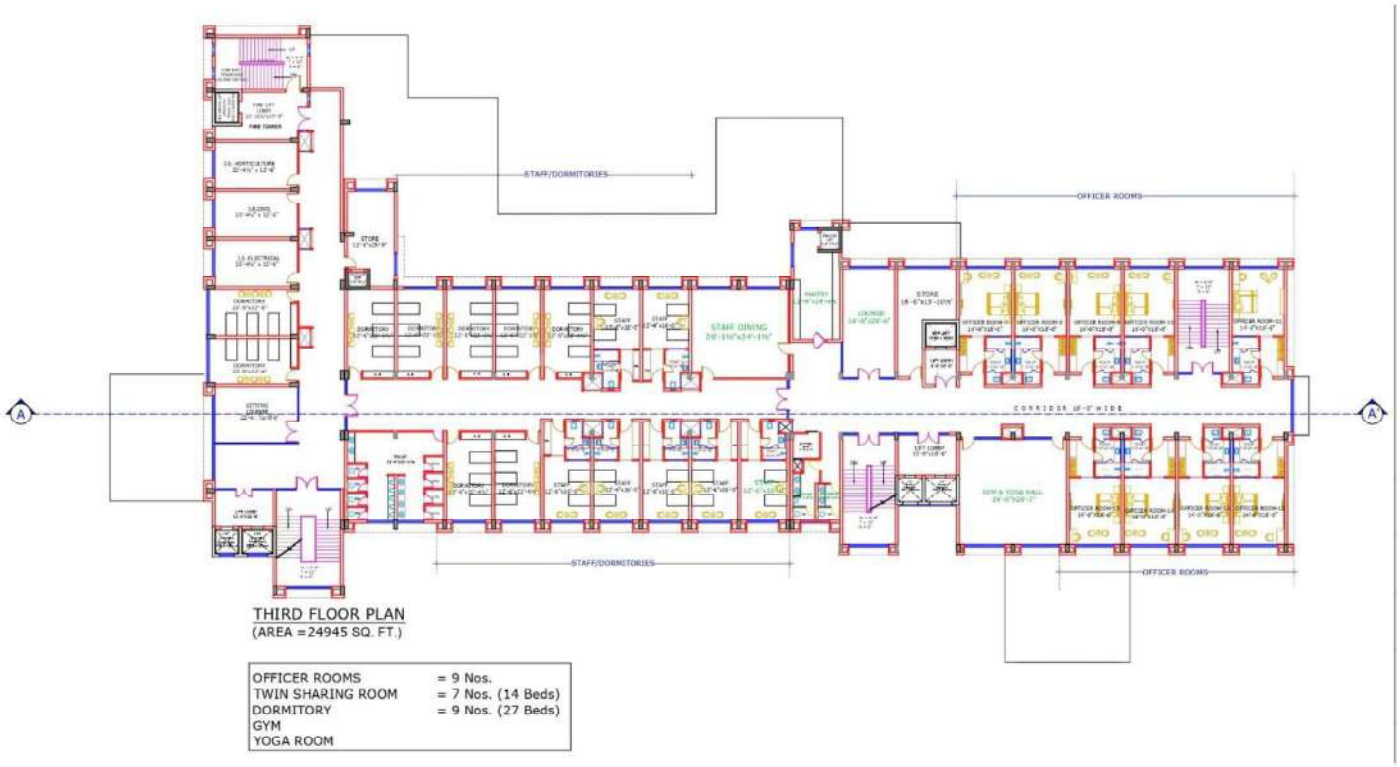

Figure 4: Third floor plan

Building Schedules

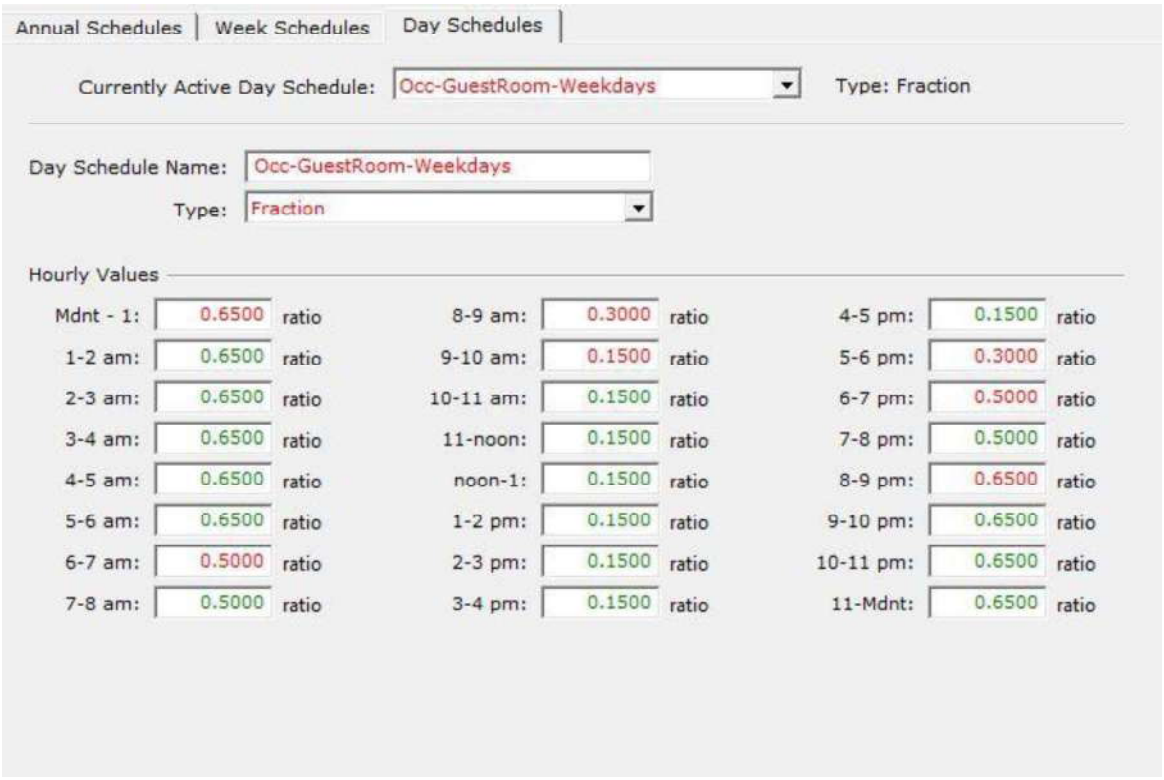

Figure 5: Hospitality occupancy weekdays

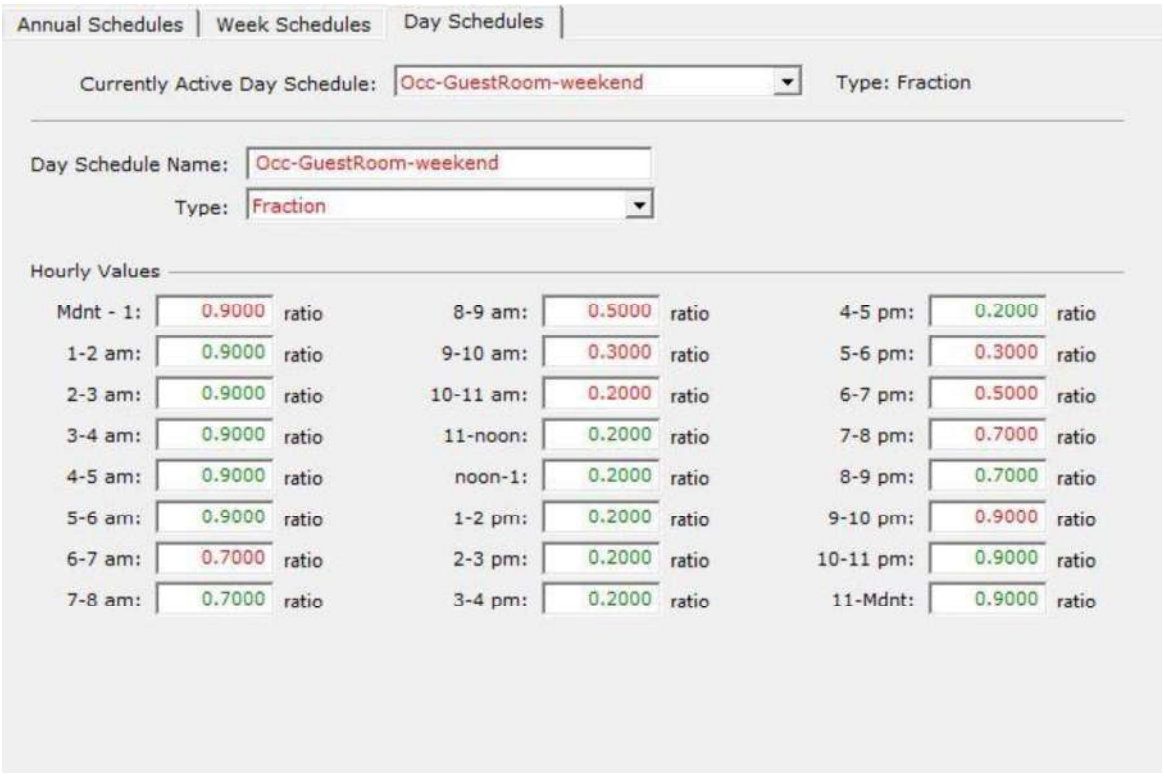

Figure 6: Hospitality occupancy weekend

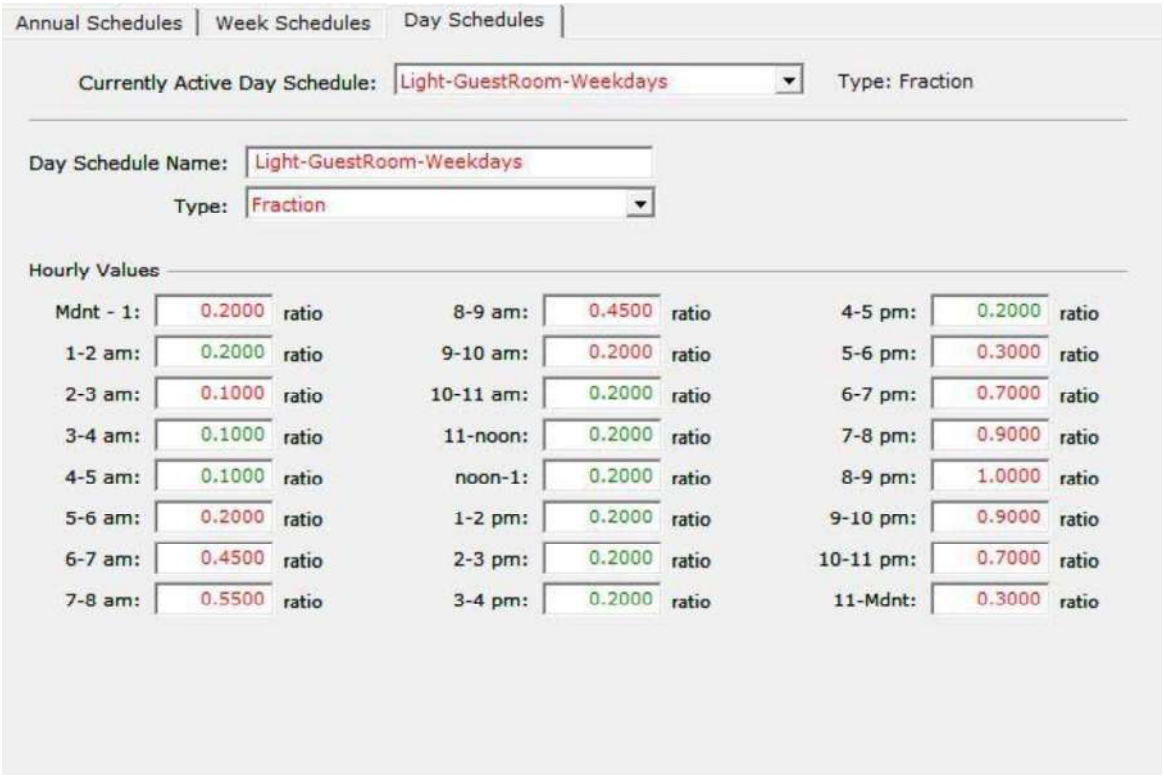

Figure 7: Hospitality lighting weekdays

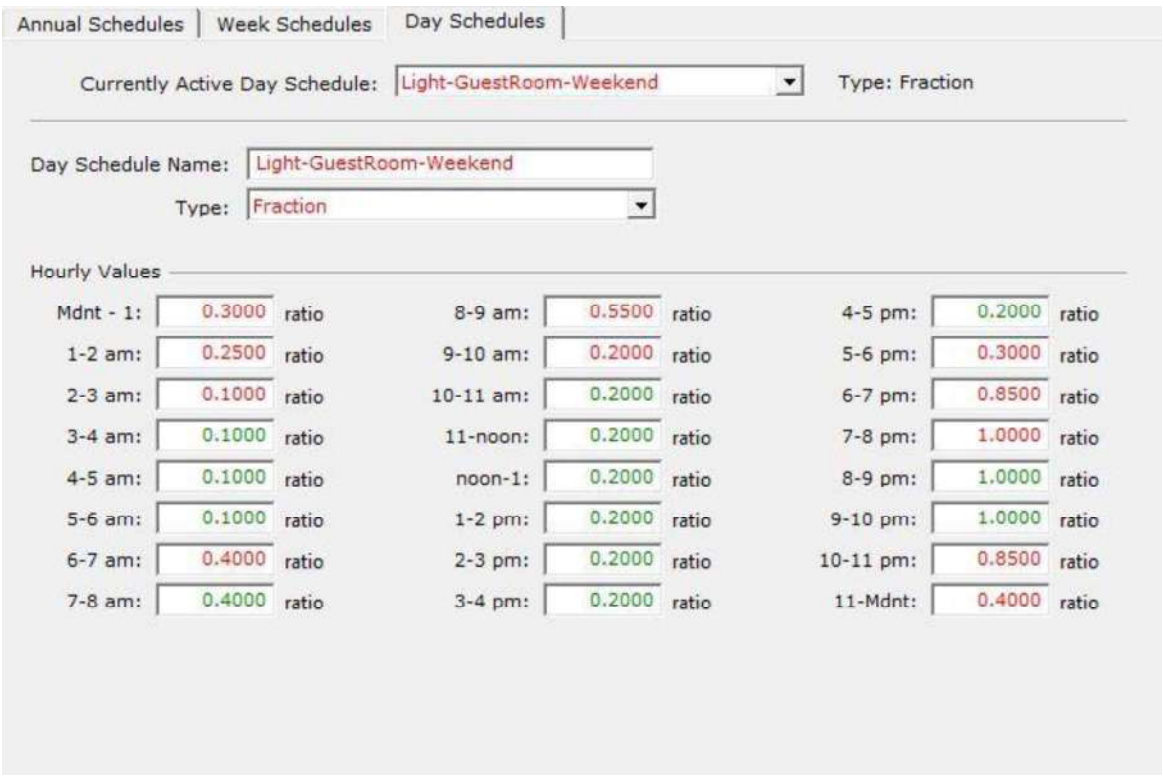

Figure 8: Hospitality lighting weekend

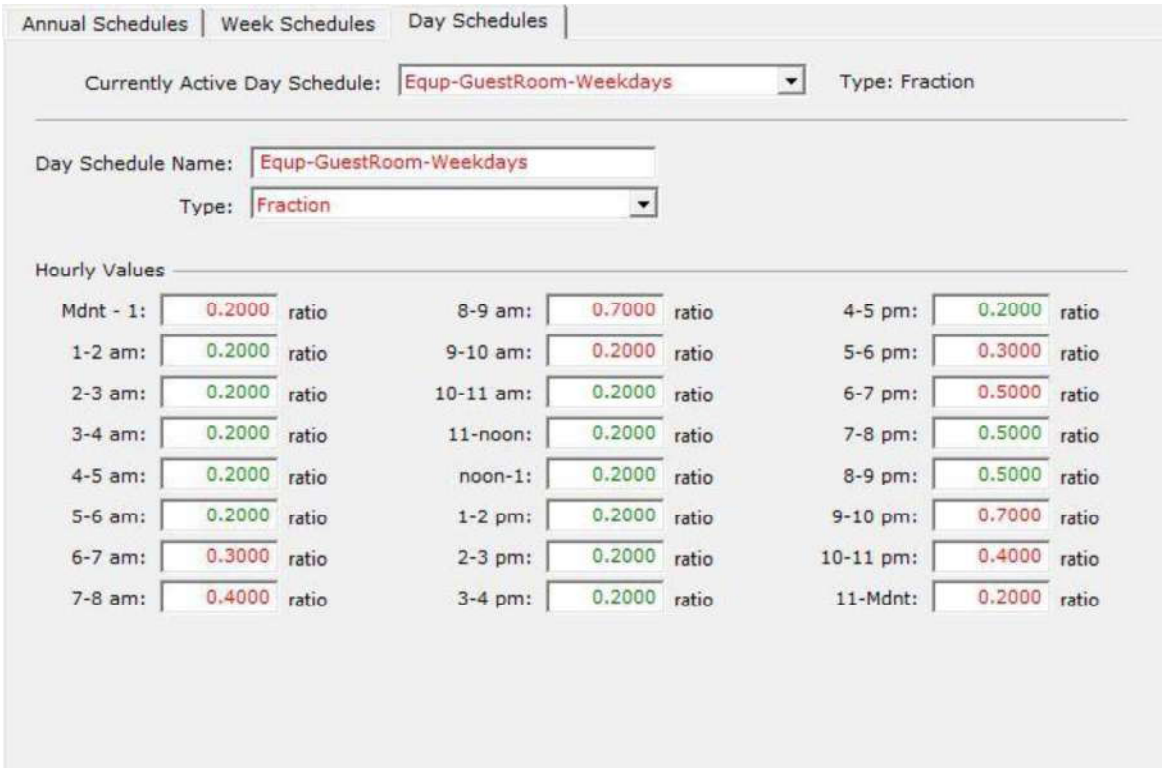

Figure 9: Hospitality equipment weekdays

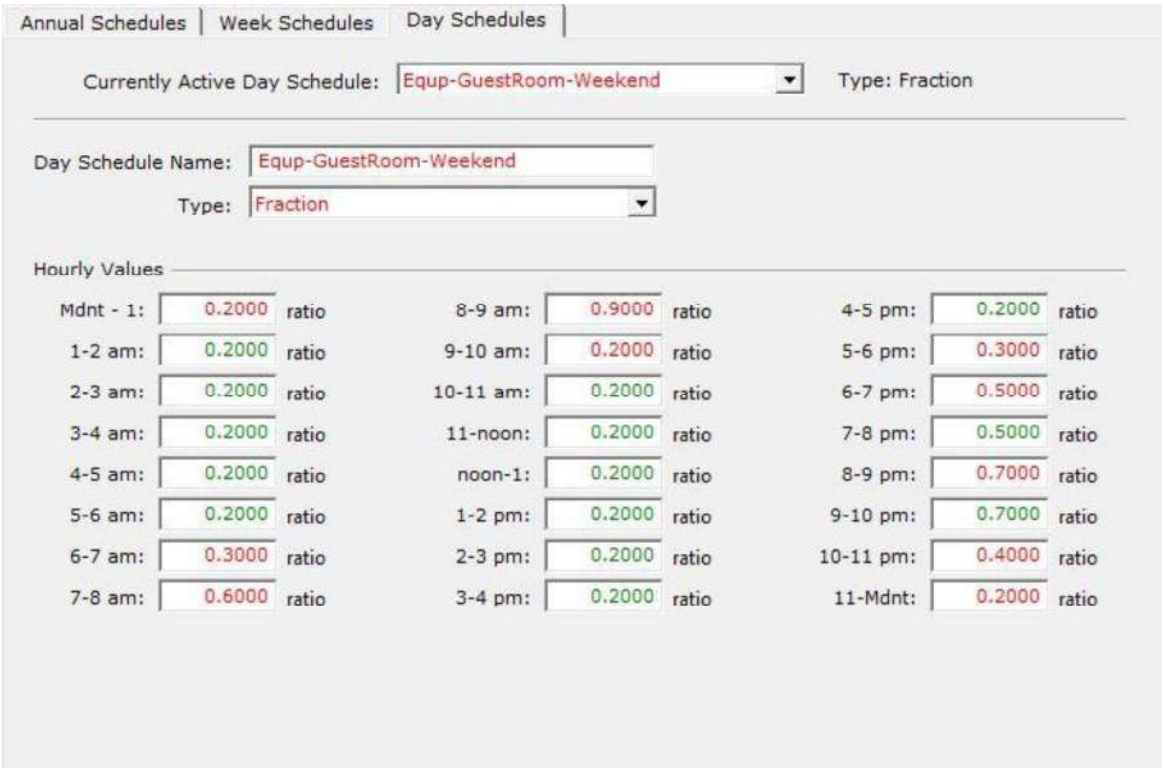

Figure 10: Hospitality equipment weekend

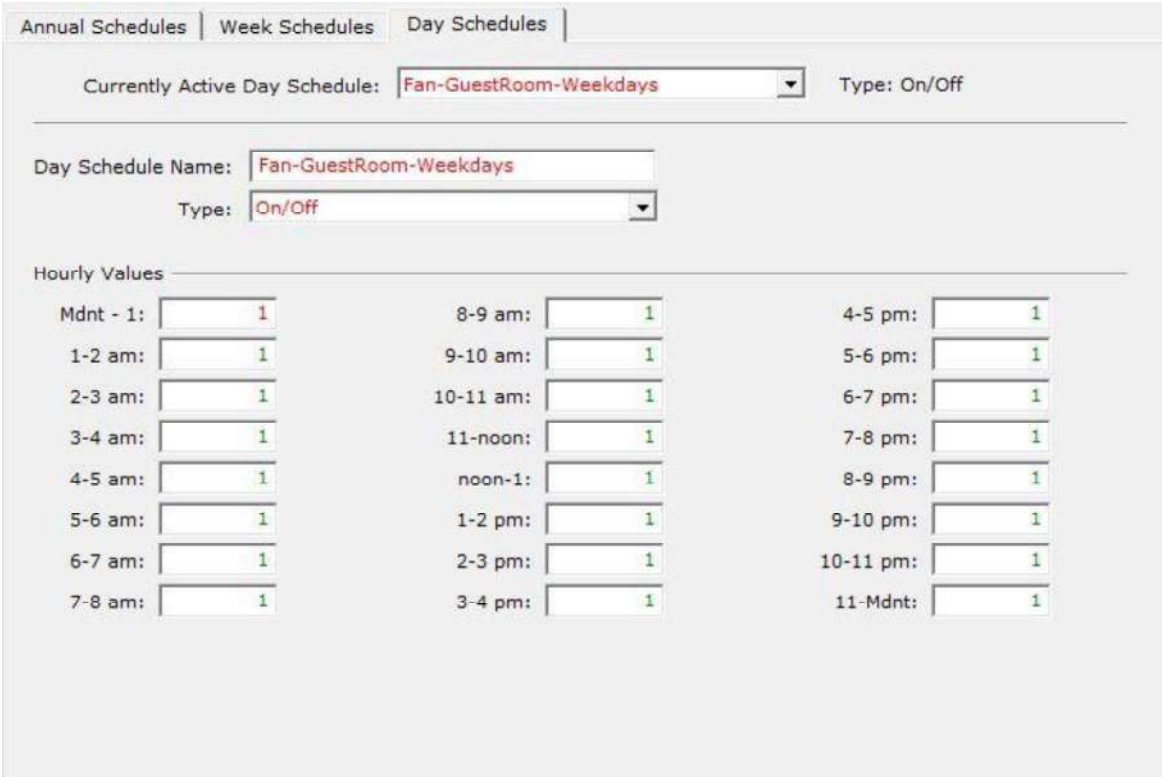

Figure 11: HVAC Fan weekdays

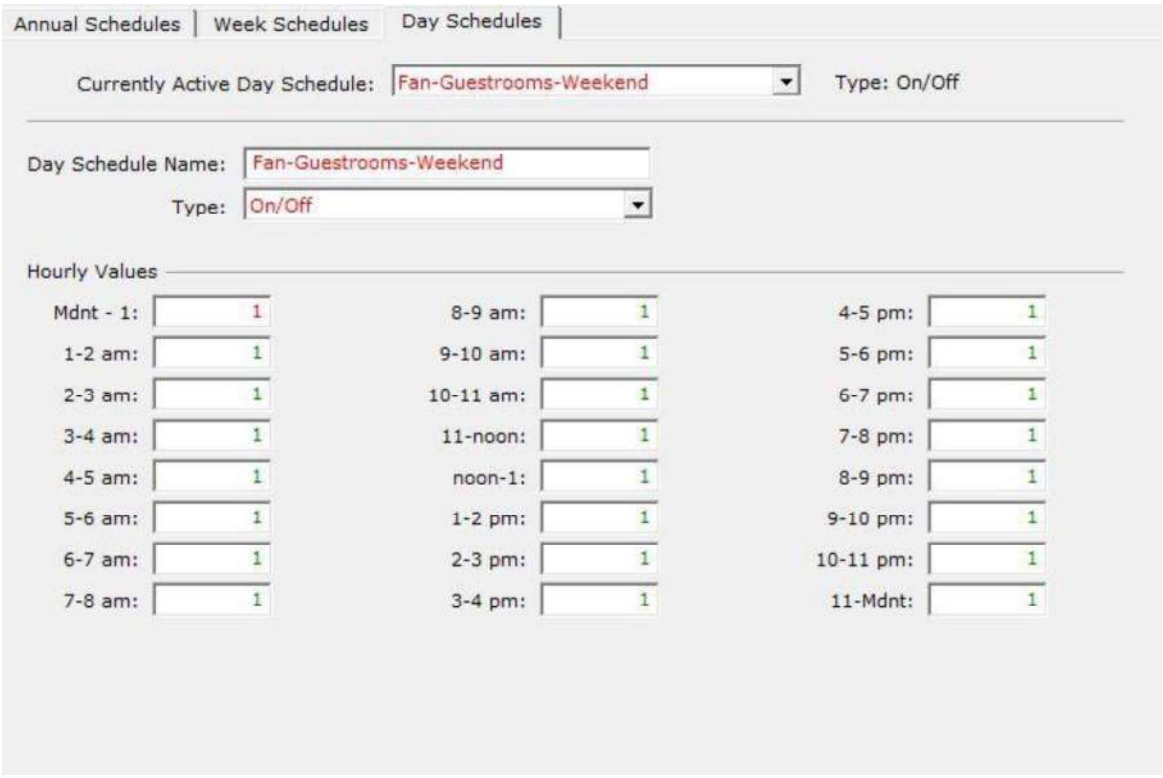

Figure 12: HVAC Fan weekend

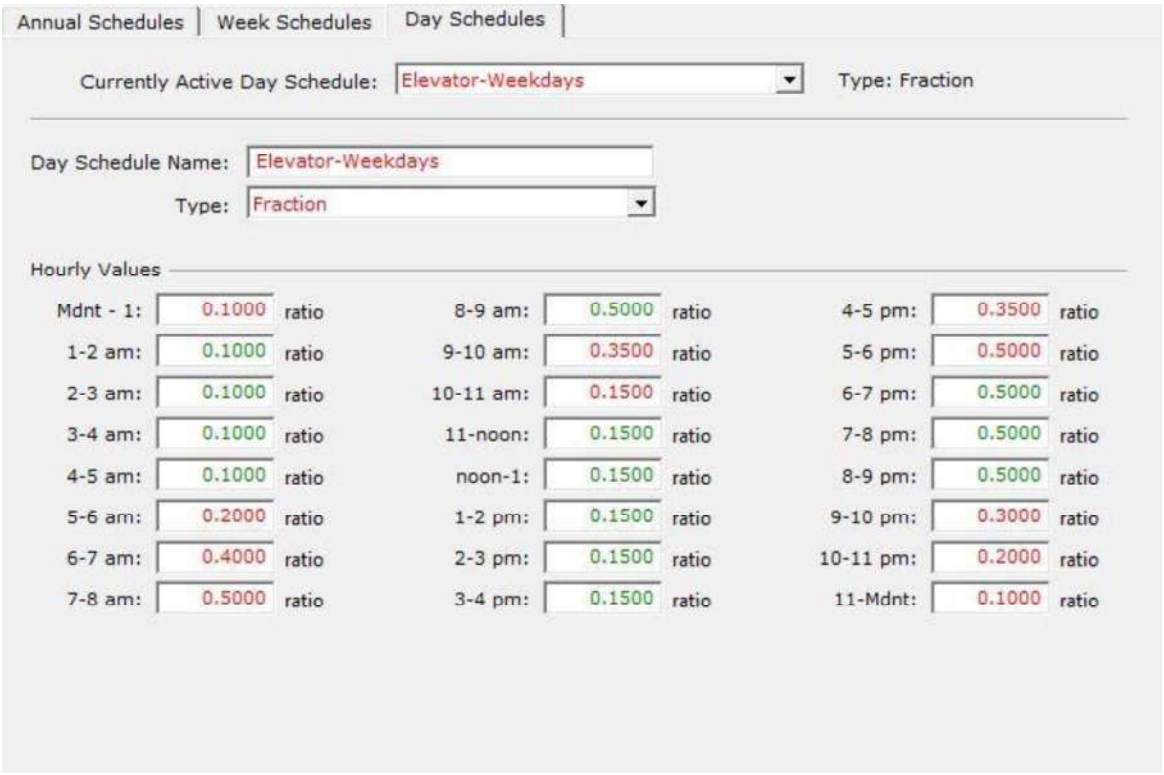

Figure 13: Elevator weekdays

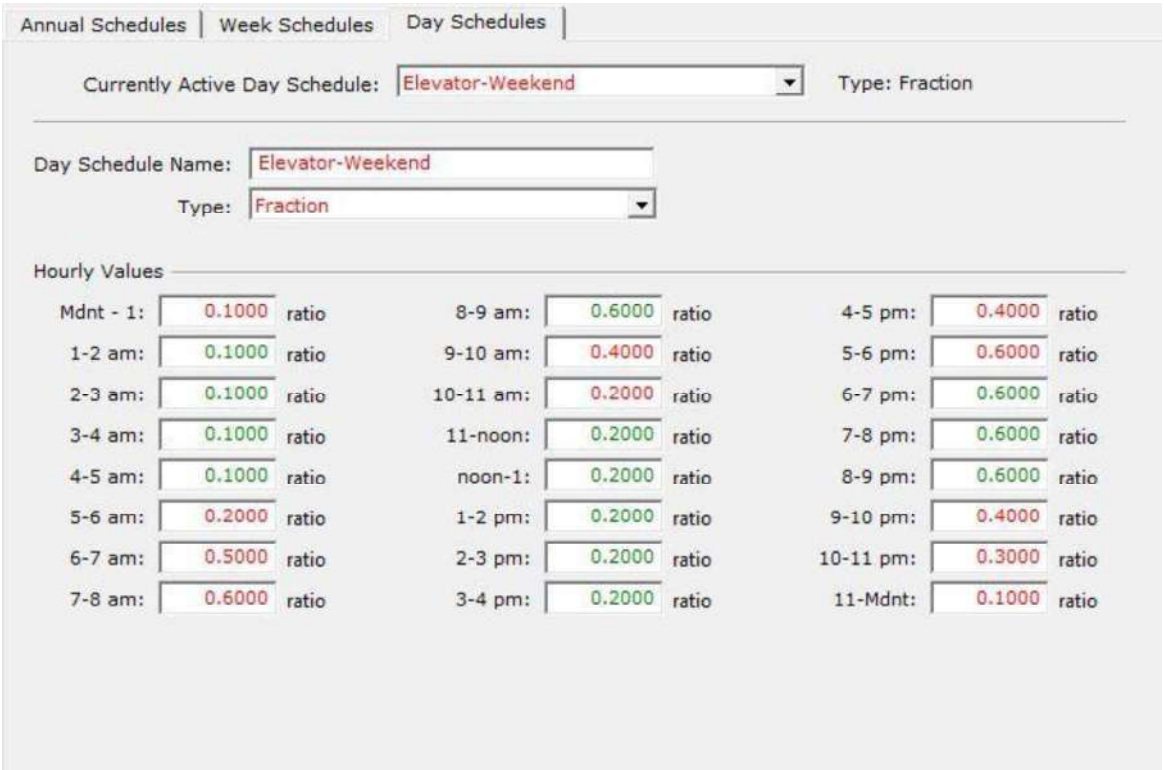

Figure 14: Elevator weekend

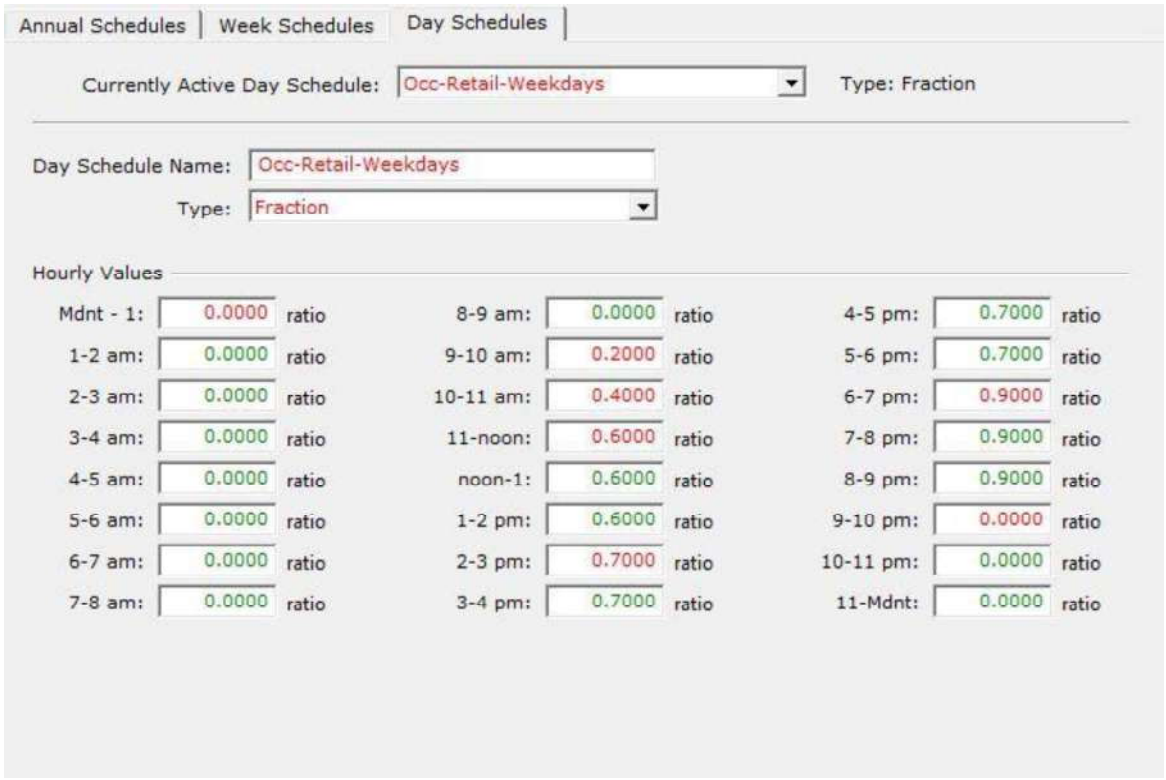

Figure 15: Shopping complex (Strip-Retail) occupancy weekdays

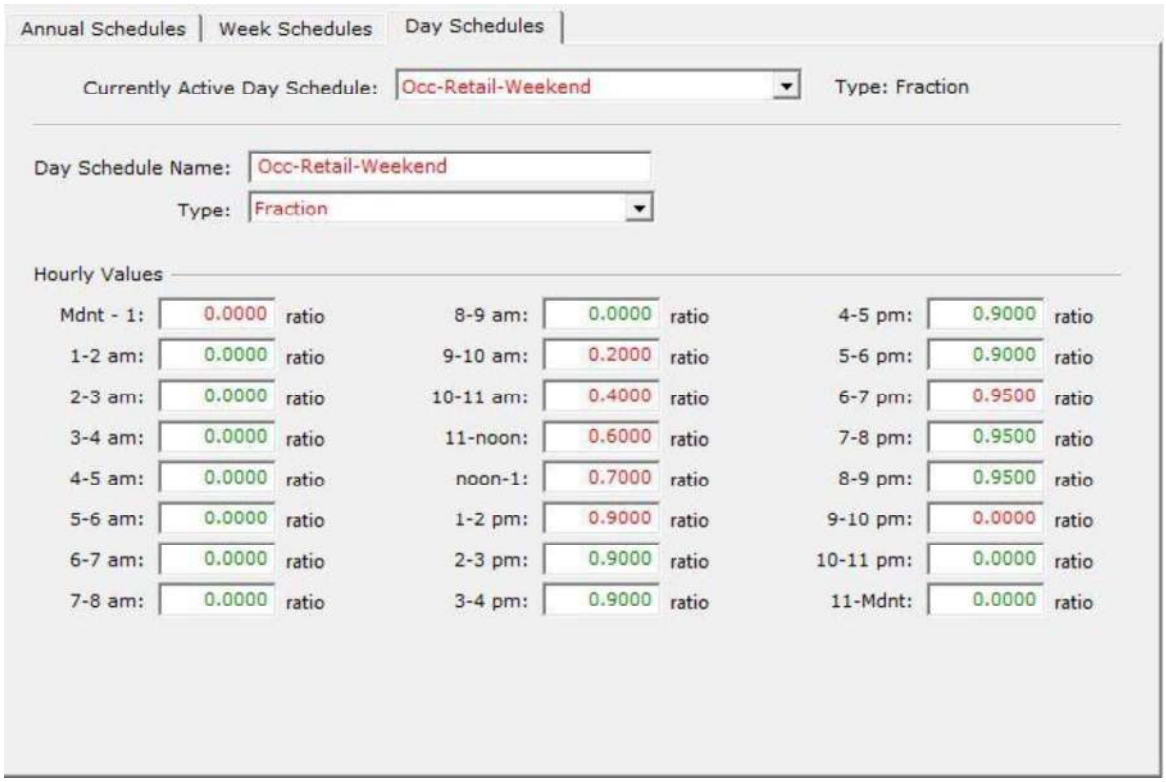

Figure 16: Shopping complex (Strip-Retail) occupancy weekend

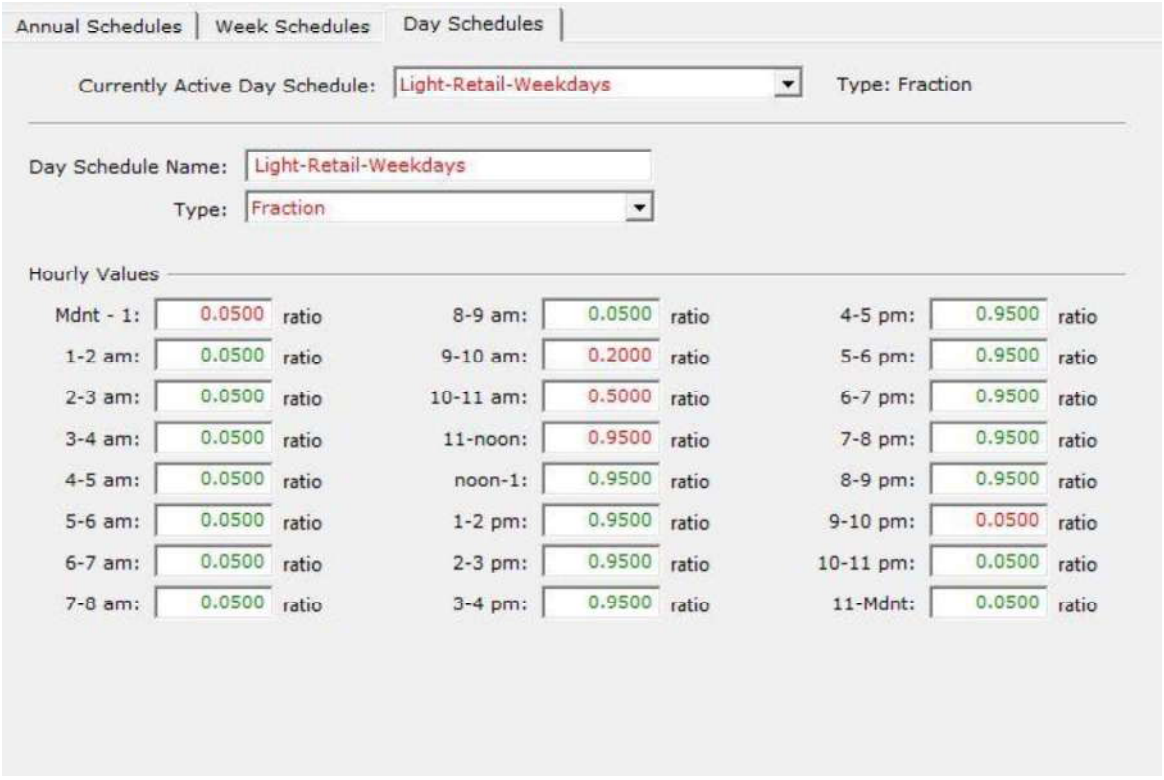

Figure 17: Shopping complex (Strip-Retail) lighting weekdays

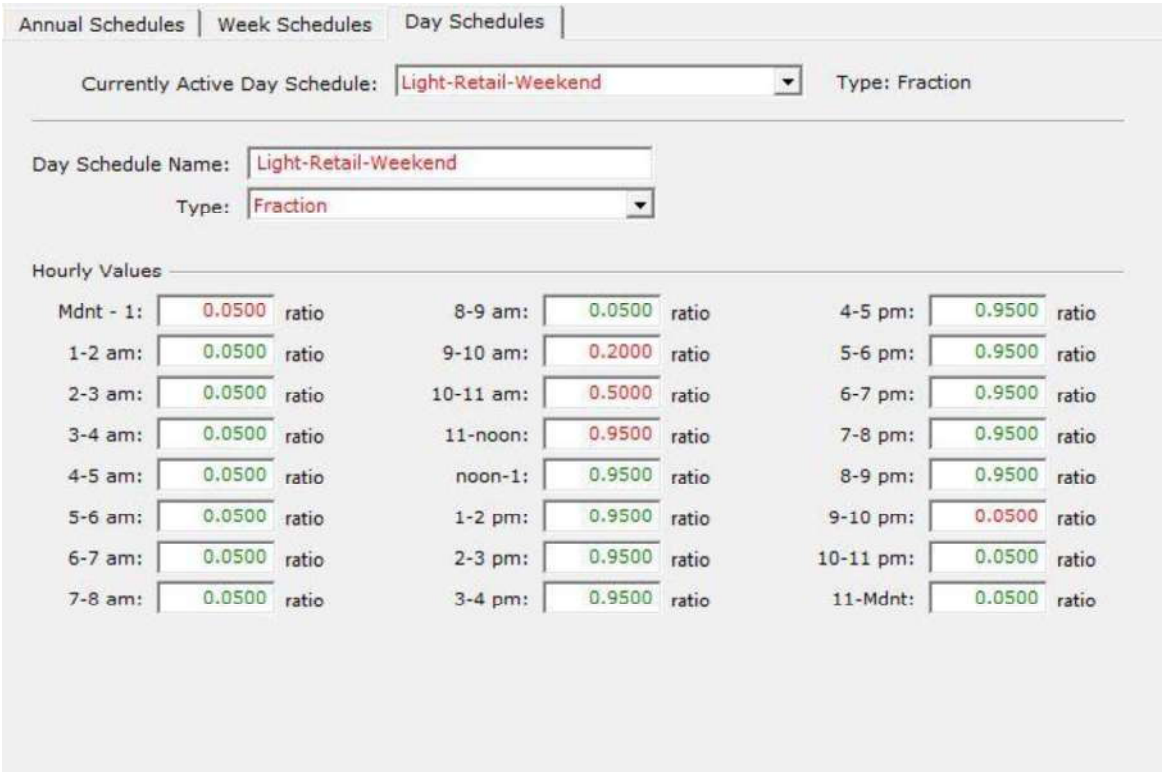

Figure 18: Shopping complex (Strip-Retail) lighting weekend

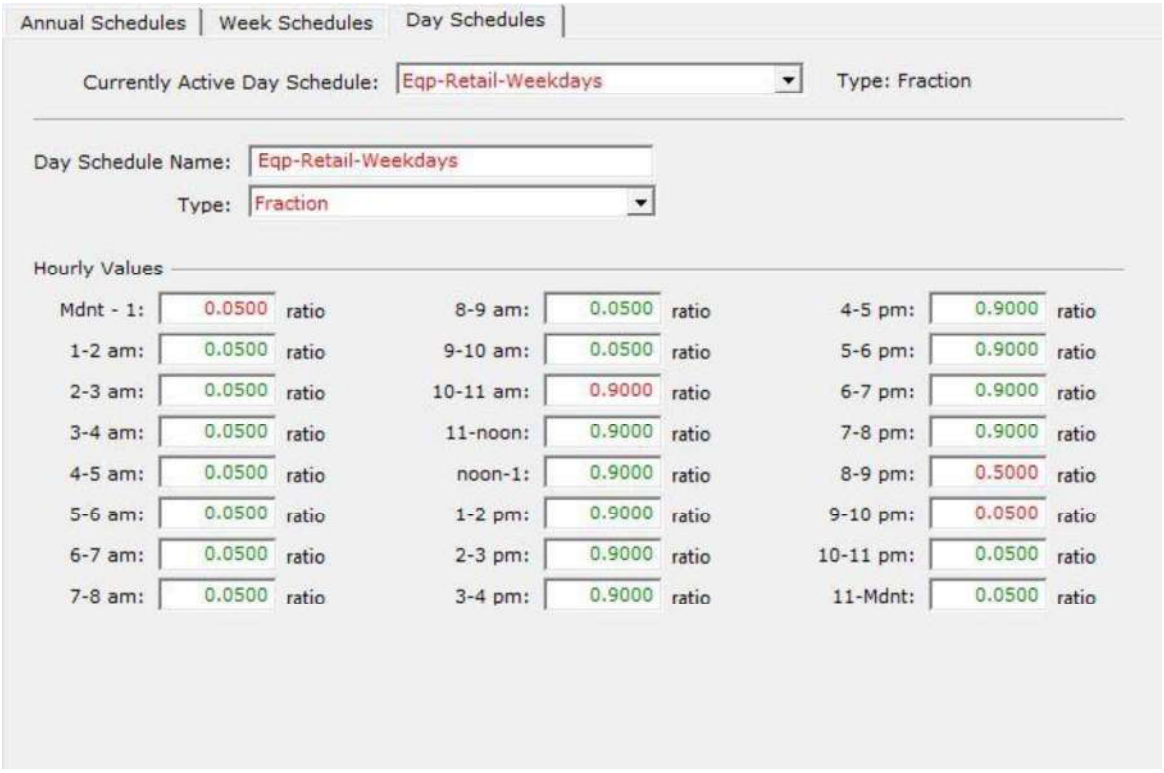

Figure 19: Shopping complex (Strip-Retail) equipment weekend

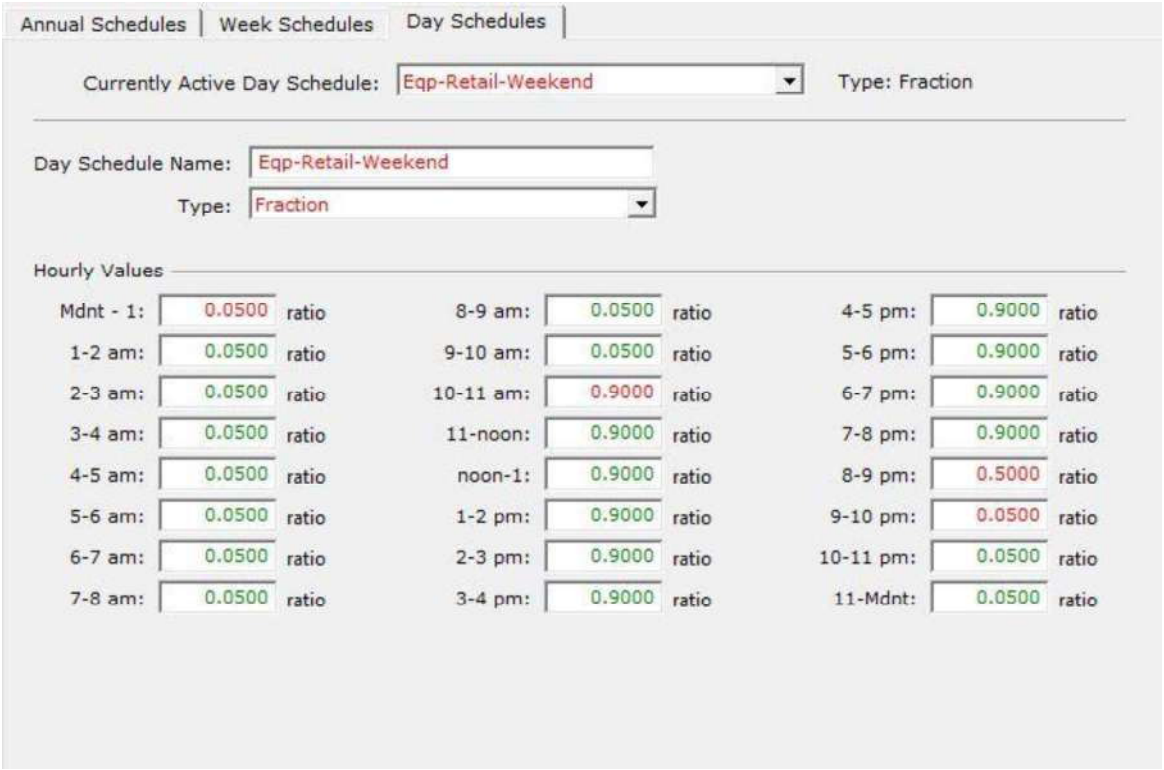

Figure 20: Shopping complex (Strip-Retail) equipment weekend

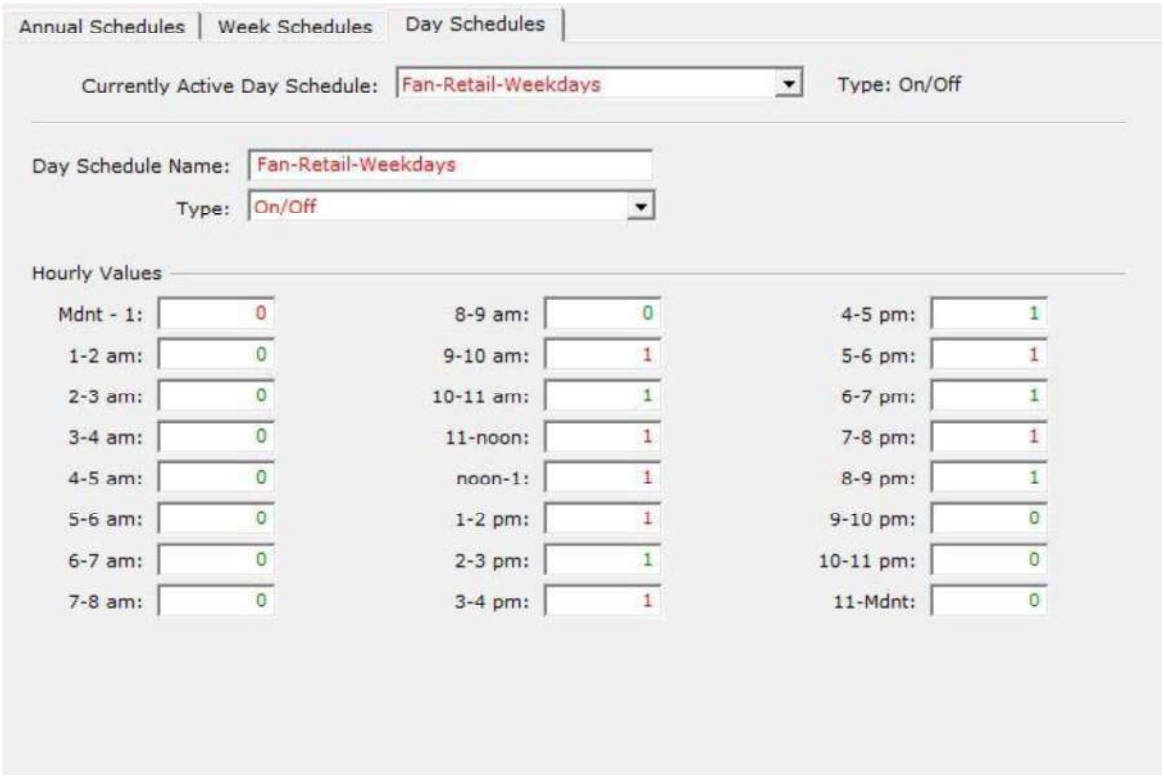

Figure 21: HVAC Fan weekdays

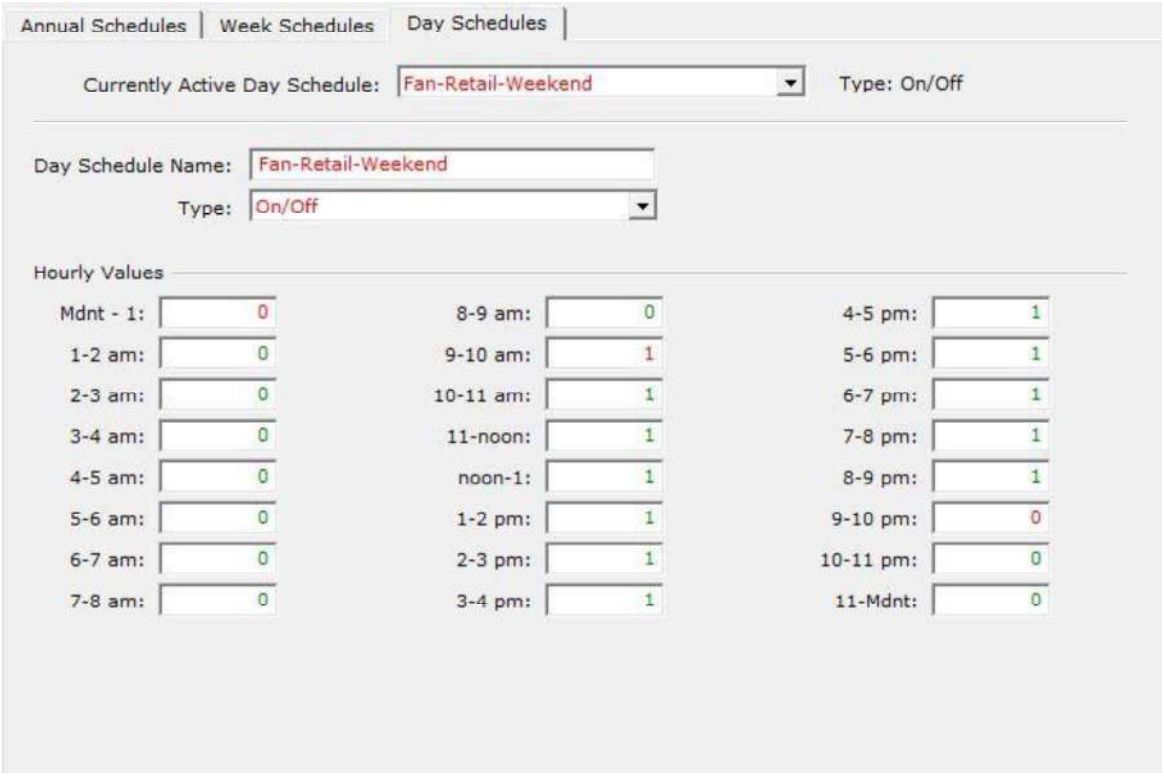

Figure 22: HVAC Fan weekend

ENVELOPE DETAILED SPECIFICATION

Table 1: Building envelope properties

Component	Category	Input Parameter	Base case	Proposed
Envelope	Wall	Material	As per ECBC	200 mm AAC Block
		U-value (Btu/hr.sqft.F)	0.0704	0.119
	Roof	Material	As per ECBC	11 mm clay tiles + 115 mm RCC + 25 mm XPS +25 mm PUF + 50 mm Wood
		U-value (Btu/hr.sqft.F)	0.058	0.090
	Glass	U-value (Btu/hr.sqft.F)	0.528	0.264
		SHGC	0.27	0.27
		Shading Coefficient	0.31	0.32
		VLT	-	49%

Table 1 above lists the building envelope properties used for WBP method for Proposed Development

Table 2: U-Value calculation - Building envelope

Wall Construction						
Sr.No	Description	Thickness (m)	K (W/m.K)	R (m^2.K/W)	U (W/m^2.k)	U (Btu/hr-ft^2.F)
1	Inner Air Film			0.12		
2	Internal Plaster	0.02	0.72	0.03		
3	AAC Block	0.23	0.1839	1.25		
4	External Plaster	0.025	0.72	0.03		
5	External Air Film			0.04		
				1.48	0.68	0.119

Roof Construction						
Sr.No	Description	Thickness (m)	K (W/m.K)	R (m^2.K/W)	U (W/m^2.k)	U (Btu/hr-ft^2.F)
1	Inner Air Film			0.12		
2	RCC Slab	0.15	0.357	0.42		
3	PUF	0.05	0.0372	1.34		
4	External Plaster	0.015	0.72	0.02		
5	External Air Film			0.04		
				1.95	0.51	0.090

HVAC (Heating, Ventilation & Air-conditioning)

Ventilation system has been model in accordance with requirement of §5.2.1 of the code. CFM and load calculation has been summary sheet has been attached in Annexure 1.

Table 3: Zone cooling & heating set point

Component	Category	Input Parameter	Base case	Proposed
HVAC	Specification	**System**	VRF with DOAS sys	VRF with DOAS sys
		Efficiency (EER)	3.02	3.5
	Operation	**Schedule**	As per ECBC 2017	
	Temperature	**Cooling set point** (^{o}F)	75	
		Heating set point (^{o}F)	70	

Lighting

Table 4: LPD level as per ECBC

Lighting Power Density calculation (As per space function method- ECBC §6.3.5)			
Space	Baseline case	Propose case	Unit
Internal	0.91	0.71	W/ ft^2
External	0.88	0.79	W/ ft^2

Electrical Power

3.1.10. Transformer

The maximum total losses of the proposed transformer at 100% loading and 50% loading has been determined as per ECBC 2017 Table 7-2. Additional metering class current transformers (CTs) and potential transformers (PTs) shall be provided. Voltage drop for feeders shall not exceed 2% at design load. Voltage drop for branch circuit shall not exceed 3% at design load.

3.1.11. Motors (type, efficiency)

IE-2 High Efficiency Motors has been recommended as per ECBC 2017 Section 7.2.2 and shall be followed.

3.1.12. Diesel generator sets

BEE 3 Star Rated Diesel Generator sets have been recommended as per ECBC 2017 Section 7.2.3 and shall be followed.

3.1.13. Check metering and monitoring

Permanently installed electric meter to record demand (kW), energy (kWh), and total power factor (kVARH) has been recommended as per ECBC 2017 Section 7.2.4 and shall be followed. Additionally, sub-meters for HVAC system, Interior and Exterior Lighting and Plug loads shall also be provided.

3.1.14. Power factor correction

APFC panel shall be installed for Power Factor Correction of 0.97. Dry (MPPH type) automatic power factor improvement capacitor banks, 400/430 Volts shall confirm to IS-2834-1964 (Amended to date). All the units shall be connected in parallel for each block by means of solid copper bars.

3.1.15. Power distribution system

Power cabling shall be sized so that the distribution losses do not exceed 3% of the total power usage as recommended in ECBC 2017 Section 7.2.6

3.1.16. Uninterruptable Power Supply (UPS)

Energy Efficient UPS system with minimum efficiency of 93.8% at 100% loading is being installed for Emergency lighting, Fire alarm and security systems.

Energy Performance Analysis

The proposed building is considered as operating throughout the day. Following table indicates the operating hours and diversity factor considered for the building.

Table 5: Operation schedule considered

Component	Category	Input Parameter	Base case	Proposed
Occupancy & Equipment	Equipment	**All spaces** (W/sqft)	1.0	
	Operation	**Equipment Schedule**	As per Section 9.6 of ECBC 2017	
		Occupancy Schedule	As per Section 9.6 of ECBC 2017	

Table 6: Summary of Unmet hours

BLOCK 1

Baseline case	Cool Unmet hour	240
	Heat Unmet hour	0
Proposed case	Cool Unmet hour	148
	Heat Unmet hour	0

BLOCK 2

Baseline case	Cool Unmet hour	179
	Heat Unmet hour	5
Proposed case	Cool Unmet hour	183
	Heat Unmet hour	3

BLOCK 3

Baseline case	Cool Unmet hour	106
	Heat Unmet hour	0
Proposed case	Cool Unmet hour	45
	Heat Unmet hour	0

Table 7: Summary of total tonnage and Sq. ft. per TR

BLOCK 1

	Total tonnage	Sq. ft. per TR
Proposed case	174	261
Baseline case	316	143

BLOCK 2

	Total tonnage	Sq. ft. per TR
Proposed case	101	262
Baseline case		

BLOCK 3

	Total tonnage	Sq. ft. per TR
Proposed case	45	312
Baseline case	44	324

Summary of Renewable Energy generation of the project:

A dedicated REGZ equivalent to at least 25 % of roof area or area required for generation of energy equivalent to 1% of total peak demand or connected load of the building, whichever is less, shall be provided in all buildings.

Total peak demand of the building = 331.1 KW

Therefore, 1% of peak demand = (331.1*0.01) = 3.31 kW

Therefore, the project has proposed to install **5 kW** PV system = (5/331.1) X 100% = 1.5 % of total peak demand.

Solar PV generation calculation has been attached in Annexure 2.

Building View:

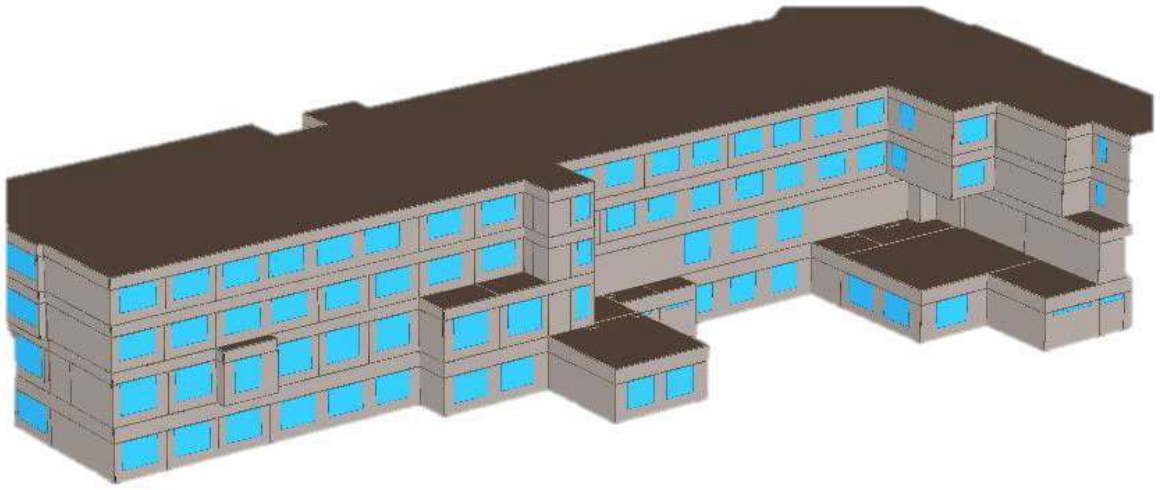

Figure 23: 3D Front View PWD Rest House – Block 1

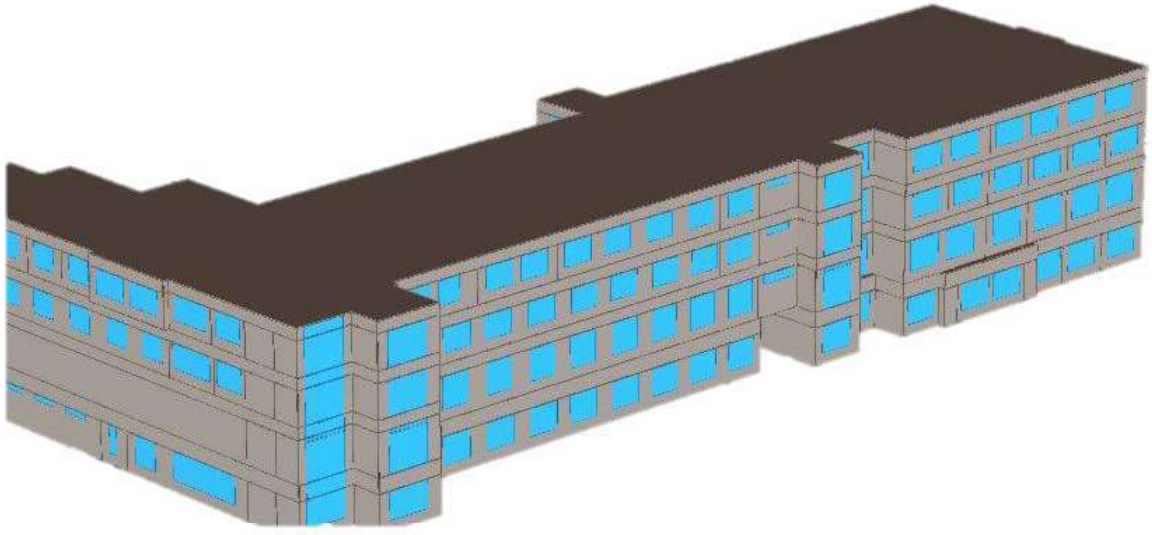

Figure 24: 3D Rear View PWD Rest House – Block 1

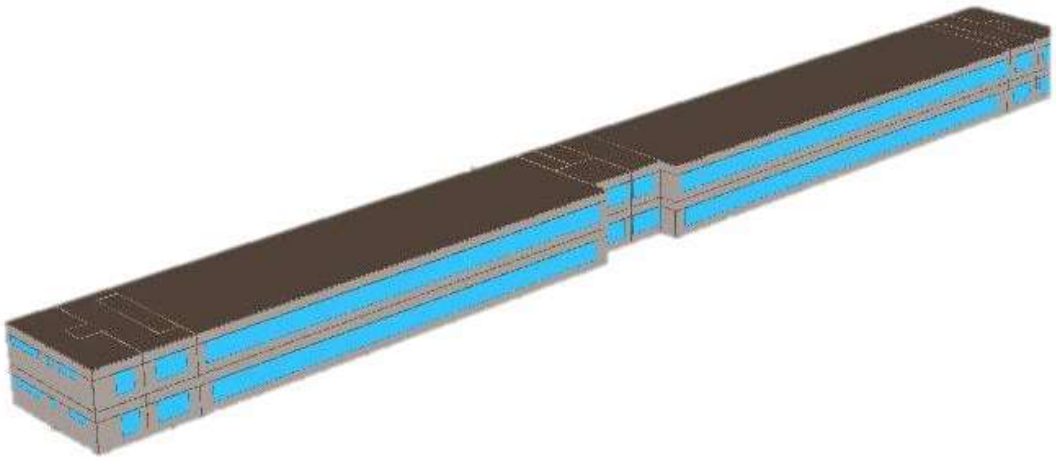

Figure 25: 3D Front View PWD Rest House – Block 2

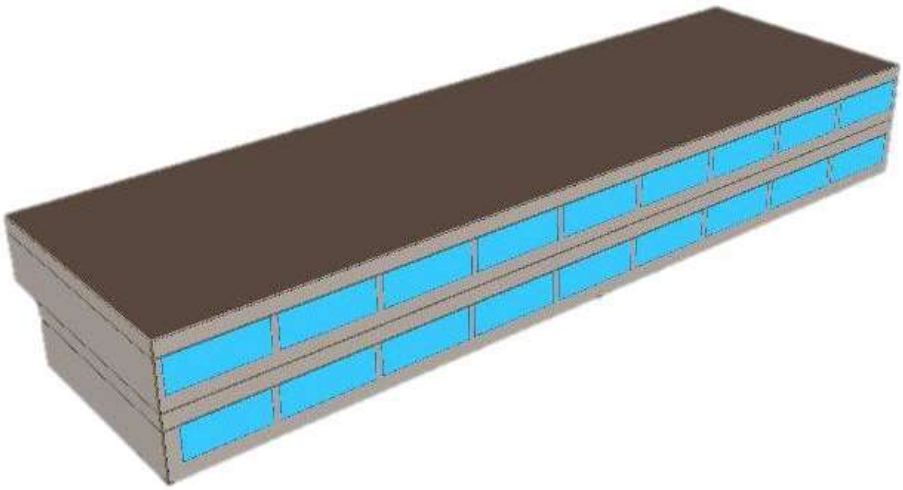

Figure 26: 3D Front View PWD Rest House – Block 3

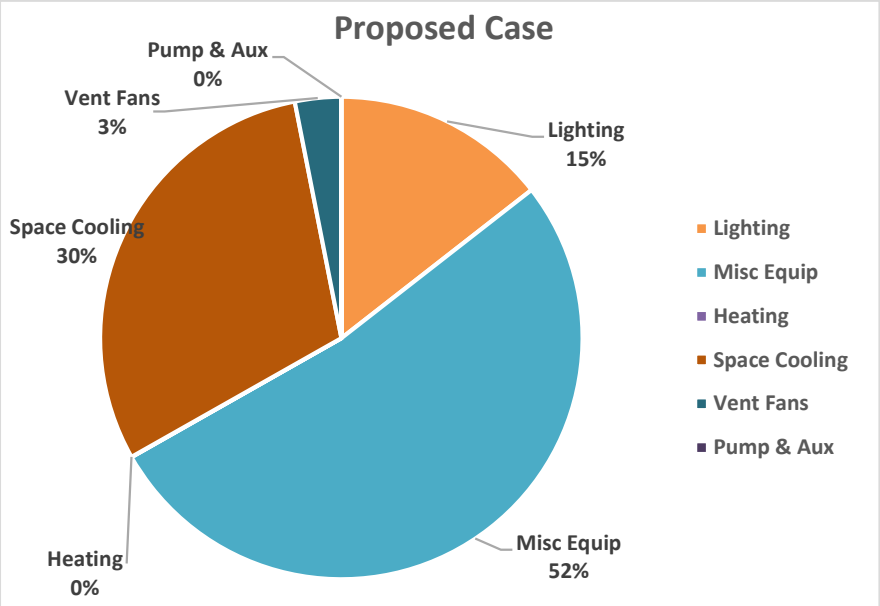

Figure 27: Proposed Energy End Use Characterization

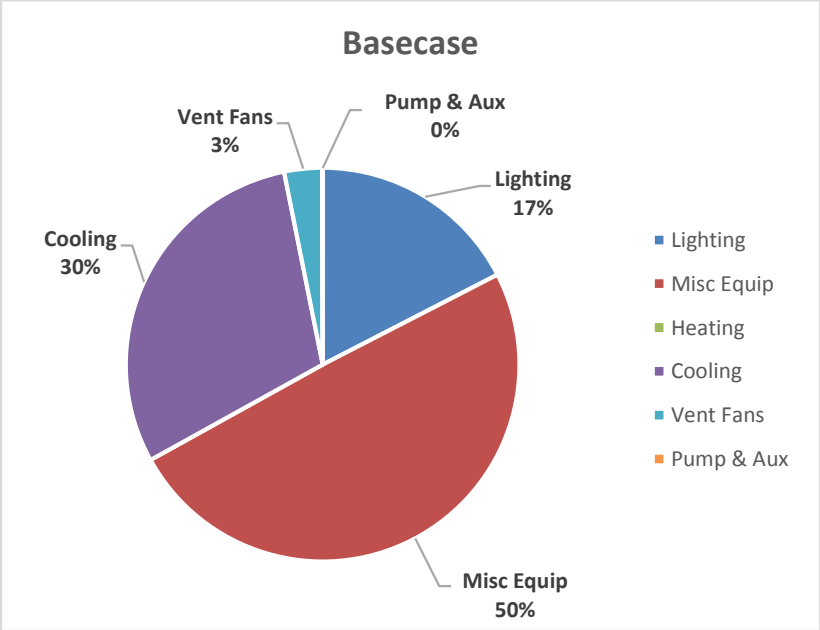

Figure 28: Base case Energy End Use Characterization

Overall Energy Consumption

Table 8: Overall Energy consumption in kWh (without basement and external lighting consumption)

BLOCK 1

Description	UNITS	LIGHTS	MISC EQUIP	Heating	Cooling	Pump & Aux	VENT FANS	TOTAL
PROPOSED	**KWH**	**214531**	**394728**	**150**	**365282**	**119**	**49307**	**1024117**
BASE - 0 DEG	KWH	275313	394728	169	440263	119	64682	1175274
BASE- 90 DEG	KWH	275313	394728	159	459310	119	66111	1195740
BASE - 180 DEG	KWH	275313	394728	150	449398	119	64621	1184329
BASE - 270 DEG	KWH	275313	394728	146	442880	119	64962	1178148
BASE - AVG	**KWH**	**275313**	**394728**	**156.0**	**447962.8**	**119**	**65094**	**1183373**
ENERGY / COST SAVINGS		**22.1**	**0.0**	**3.8**	**18.5**	**0.0**	**24.3**	

BLOCK 2

Description	UNITS	LIGHTS	MISC EQUIP	Heating	Cooling	Pump & Aux	VENT FANS	TOTAL
PROPOSED	**KWH**	**118615**	**133722**	**425**	**131980**	**60**	**17346**	**402148**
BASE - 0 DEG	KWH	145412	133722	627	150283	60	14070	444174
BASE- 90 DEG	KWH	145412	133722	882	163688	60	17256	461020
BASE - 180 DEG	KWH	145412	133722	474	153557	60	17079	450304
BASE - 270 DEG	KWH	145412	133722	936	161130	60	16620	457880
BASE - AVG	**KWH**	**145412**	**133722**	**729.8**	**157164.5**	**60**	**16256.3**	**453345**
ENERGY / COST SAVINGS		**18.4**	**0.0**	**41.8**	**16.0**	**0.0**	**-6.7**	

BLOCK 3

Description	UNITS	LIGHTS	MISC EQUIP	Heating	Cooling	Pump & Aux	VENT FANS	TOTAL
PROPOSED	**KWH**	**78388**	**52615**	**118**	**96659**	**60**	**8591**	**236431**
BASE - 0 DEG	KWH	97972	52615	107	112524	60	9136	272414
BASE- 90 DEG	KWH	97972	52615	121	120864	60	10189	281821
BASE - 180 DEG	KWH	97972	52615	94	113384	60	10428	274553
BASE - 270 DEG	KWH	97972	52615	130	118213	60	9486	278476
BASE - AVG	**KWH**	**97972**	**52615**	**113.0**	**116246.3**	**60**	**9809.75**	**276816**
ENERGY / COST SAVINGS		**20.0**	**0.0**	**-4.4**	**16.8**	**0.0**	**12.4**	

PROJECT SUMMARY

Description	UNITS	LIGHTS	MISC EQUIP	Heating	Cooling	Pump & Aux	VENT FANS	TOTAL
PROPOSED	**KWH**	**411534**	**581065**	**693**	**593921**	**239**	**75244**	**1662696**
BASE - 0 DEG	KWH	518697	581065	903	703070	239	87888	1891862
BASE- 90 DEG	KWH	518697	581065	1162	743862	239	93556	1938581
BASE - 180 DEG	KWH	518697	581065	718	716339	239	92128	1909186
BASE - 270 DEG	KWH	518697	581065	1212	722223	239	91068	1914504
BASE - AVG	**KWH**	**518697**	**581065**	**998.8**	**721373.5**	**239**	**91160**	**1913533**
ENERGY / COST SAVINGS		**20.7**	**0.0**	**30.6**	**17.7**	**0.0**	**17.5**	

From the above table following parameters are analysed, proposed case energy consumption of the project is estimated to be **1662696** kWh, which is less than the base case energy consumption i.e., **1913533** kWh.

Therefore, project achieves energy saving of 13.1% when compared with ECBC baseline case. Thereby, project is meeting the ECBC compliance by 'Whole Building Performance' approach.

e-Quest Output Screenshots

Commercial Building

Baseline 0 degree

BLOCK 1

```
Rest house - hisar                                                    DOE-2.2-48y   2/09/2022    9:51:02  BDL RUN  1

REPORT- BEPU Building Utility Performance                                        WEATHER FILE- EPW Hissar,Haryana,I
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                  LIGHTS   TASK LIGHTS   MISC EQUIP   SPACE HEATING   SPACE COOLING   HEAT REJECT   PUMPS & AUX   VENT FANS   REFRIG DISPLAY   HT PUMP SUPPLEM   DOMEST HOT WTR   EXT USAGE   TOTAL
                 -------   ----------   ----------   -------------   -------------   -----------   -----------   ---------   --------------   ---------------   --------------   ---------   --------

EM1  ELECTRICITY
    KWH         275313.          0.      394728.           169.        440263.           0.          119.       64682.              0.                0.               0.       41610.   1216884.

FM1  NATURAL-GAS
    THERM            0.          0.           0.             0.             0.           0.            0.          0.              0.                0.               0.          0.         0.


          TOTAL ELECTRICITY    1216884. KWH         26.820 KWH     /SQFT-YR GROSS-AREA    26.820 KWH     /SQFT-YR NET-AREA


          PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE =  2.74
          PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED                =  0.00
          HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE                =   240
          HOURS ANY ZONE BELOW HEATING THROTTLING RANGE                =     0

          NOTE:  ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.
```

BLOCK 2

```
PWD Office - hisar                                                    DOE-2.2-48y   2/14/2022   11:24:26  BDL RUN  1

REPORT- BEPU Building Utility Performance                                        WEATHER FILE- EPW Hissar,Haryana,I
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                  LIGHTS   TASK LIGHTS   MISC EQUIP   SPACE HEATING   SPACE COOLING   HEAT REJECT   PUMPS & AUX   VENT FANS   REFRIG DISPLAY   HT PUMP SUPPLEM   DOMEST HOT WTR   EXT USAGE   TOTAL
                 -------   ----------   ----------   -------------   -------------   -----------   -----------   ---------   --------------   ---------------   --------------   ---------   --------

EM1  ELECTRICITY
    KWH         145412.          0.      133722.           627.        150283.           0.           60.       14070.              0.                0.               0.       9607.    453779.

FM1  NATURAL-GAS
    THERM            0.          0.           0.             0.             0.           0.            0.          0.              0.                0.               0.          0.         0.


          TOTAL ELECTRICITY     453779. KWH         17.074 KWH     /SQFT-YR GROSS-AREA    17.074 KWH     /SQFT-YR NET-AREA


          PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE =  7.07
          PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED                =  0.00
          HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE                =   179
          HOURS ANY ZONE BELOW HEATING THROTTLING RANGE                =     5

          NOTE:  ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.
```

BLOCK 3

PWD Shop - hisar DOE-2.2-48y 2/14/2022 15:10:17 BDL RUN 2

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1 ELECTRICITY KWH	97972.	0.	52615.	107.	112524.	0.	60.	9136.	0.	0.	0.	0.	272414.
FM1 NATURAL-GAS THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 272414. KWH 19.181 KWH /SQFT-YR GROSS-AREA 19.181 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 2.42
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 106
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Baseline 90 degree

BLOCK 1

Rest house - hisar DOE-2.2-48y 2/07/2022 16:27:07 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1 ELECTRICITY KWH	275313.	0.	394728.	159.	459310.	0.	119.	66111.	0.	0.	0.	41610.	1237348.
FM1 NATURAL-GAS THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 1237348. KWH 27.271 KWH /SQFT-YR GROSS-AREA 27.271 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 1.35
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 118
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

BLOCK 2

PWD Office - hisar DOE-2.2-48y 2/14/2022 11:37:33 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

		LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1	ELECTRICITY													
	KWH	145412.	0.	133722.	882.	163688.	0.	60.	17256.	0.	0.	0.	9607.	470626.
FM1	NATURAL-GAS													
	THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 470626. KWH 17.708 KWH /SQFT-YR GROSS-AREA 17.708 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 6.96
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 173
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 8

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

BLOCK 3

PWD Shop - hisar DOE-2.2-48y 2/14/2022 15:38:12 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

		LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1	ELECTRICITY													
	KWH	97972.	0.	52615.	121.	120864.	0.	60.	10189.	0.	0.	0.	0.	281821.
FM1	NATURAL-GAS													
	THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 281821. KWH 19.844 KWH /SQFT-YR GROSS-AREA 19.844 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 2.42
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 106
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Baseline 180 degree

BLOCK 1

Rest house - hisar DOE-2.2-48y 2/07/2022 16:42:53 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

		LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1	ELECTRICITY													
	KWH	275313.	0.	394728.	150.	449398.	0.	119.	64621.	0.	0.	0.	41610.	1225938.
FM1	NATURAL-GAS													
	THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 1225938. KWH 27.020 KWH /SQFT-YR GROSS-AREA 27.020 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 2.51
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 220
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

BLOCK 2

PWD Office - hisar DOE-2.2-48y 2/14/2022 11:40:33 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

		LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1	ELECTRICITY													
	KWH	145412.	0.	133722.	474.	153557.	0.	60.	17079.	0.	0.	0.	9607.	459910.
FM1	NATURAL-GAS													
	THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 459910. KWH 17.305 KWH /SQFT-YR GROSS-AREA 17.305 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 7.57
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 194
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 3

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

BLOCK 3

PWD Shop - hisar DOE-2.2-48y 2/14/2022 15:41:16 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1 ELECTRICITY													
KWH	97972.	0.	52615.	94.	113384.	0.	60.	10428.	0.	0.	0.	0.	274553.
FM1 NATURAL-GAS													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 274553. KWH 19.332 KWH /SQFT-YR GROSS-AREA 19.332 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 5.66
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 248
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Baseline 270 degree

BLOCK 1

Rest house - hisar DOE-2.2-48y 2/09/2022 9:42:33 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1 ELECTRICITY													
KWH	275313.	0.	394728.	146.	442880.	0.	119.	64962.	0.	0.	0.	41610.	1219757.
FM1 NATURAL-GAS													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 1219757. KWH 26.884 KWH /SQFT-YR GROSS-AREA 26.884 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 2.41
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 211
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

BLOCK 2

PWD Office - hisar DOE-2.2-48y 2/14/2022 11:43:01 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1 ELECTRICITY													
KWH	145412.	0.	133722.	936.	161130.	0.	60.	16620.	0.	0.	0.	9607.	467487.
FM1 NATURAL-GAS													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 467487. KWH 17.590 KWH /SQFT-YR GROSS-AREA 17.590 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 6.27
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 154
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 9

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

BLOCK 3

PWD Shop - hisar DOE-2.2-48y 2/14/2022 15:43:46 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

	LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1 ELECTRICITY													
KWH	97972.	0.	52615.	130.	118213.	0.	60.	9486.	0.	0.	0.	0.	278476.
FM1 NATURAL-GAS													
THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 278476. KWH 19.608 KWH /SQFT-YR GROSS-AREA 19.608 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 2.42
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 106
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Proposed Case

BLOCK 1

```
Rest house - hisar                                                    DOE-2.2-48y   1/19/2022   21:51:15  BDL RUN  1

REPORT- BEPU Building Utility Performance                                  WEATHER FILE- EPW Hissar,Haryana,I
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                  LIGHTS  TASK LIGHTS  MISC EQUIP  SPACE HEATING  SPACE COOLING  HEAT REJECT  PUMPS & AUX  VENT FANS  REFRIG DISPLAY  HT PUMP SUPPLEM  DOMEST HOT WTR  EXT USAGE   TOTAL
                 -------  ----------  ----------  -------------  -------------  -----------  -----------  ---------  --------------  ---------------  --------------  ---------  --------

EM1  ELECTRICITY
     KWH         177061.          0.      640250.            342.      368311.           0.          119.    37823.              0.               0.              0.   106080.  1329985.

FM1  NATURAL-GAS
     THERM            0.          0.          0.              0.           0.           0.           0.        0.              0.               0.              0.        0.        0.


          TOTAL ELECTRICITY    1329985. KWH        29.313 KWH     /SQFT-YR GROSS-AREA    29.313 KWH     /SQFT-YR NET-AREA


          PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE =  3.73
          PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED                =  0.00
          HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE                =    47
          HOURS ANY ZONE BELOW HEATING THROTTLING RANGE                =    50

          NOTE:  ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.
```

BLOCK 2

```
PWD Office - hisar                                                    DOE-2.2-48y   2/14/2022   12:09:49  BDL RUN  1

REPORT- BEPU Building Utility Performance                                  WEATHER FILE- EPW Hissar,Haryana,I
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                  LIGHTS  TASK LIGHTS  MISC EQUIP  SPACE HEATING  SPACE COOLING  HEAT REJECT  PUMPS & AUX  VENT FANS  REFRIG DISPLAY  HT PUMP SUPPLEM  DOMEST HOT WTR  EXT USAGE   TOTAL
                 -------  ----------  ----------  -------------  -------------  -----------  -----------  ---------  --------------  ---------------  --------------  ---------  --------

EM1  ELECTRICITY
     KWH         118615.          0.      133722.            425.      131980.           0.           60.    17346.              0.               0.              0.     8789.   410937.

FM1  NATURAL-GAS
     THERM            0.          0.          0.              0.           0.           0.           0.        0.              0.               0.              0.        0.        0.


          TOTAL ELECTRICITY     410937. KWH        15.462 KWH     /SQFT-YR GROSS-AREA    15.462 KWH     /SQFT-YR NET-AREA


          PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE =  7.15
          PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED                =  0.00
          HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE                =   183
          HOURS ANY ZONE BELOW HEATING THROTTLING RANGE                =     3

          NOTE:  ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.
```

BLOCK 3

PWD Shop - hisar DOE-2.2-48y 2/14/2022 16:02:43 BDL RUN 1

REPORT- BEPU Building Utility Performance WEATHER FILE- EPW Hissar,Haryana,I

		LIGHTS	TASK LIGHTS	MISC EQUIP	SPACE HEATING	SPACE COOLING	HEAT REJECT	PUMPS & AUX	VENT FANS	REFRIG DISPLAY	HT PUMP SUPPLEM	DOMEST HOT WTR	EXT USAGE	TOTAL
EM1	ELECTRICITY													
	KWH	78388.	0.	52615.	118.	96659.	0.	60.	8591.	0.	0.	0.	0.	236431.
FM1	NATURAL-GAS													
	THERM	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.

TOTAL ELECTRICITY 236431. KWH 16.648 KWH /SQFT-YR GROSS-AREA 16.648 KWH /SQFT-YR NET-AREA

PERCENT OF HOURS ANY SYSTEM ZONE OUTSIDE OF THROTTLING RANGE = 1.03
PERCENT OF HOURS ANY PLANT LOAD NOT SATISFIED = 0.00
HOURS ANY ZONE ABOVE COOLING THROTTLING RANGE = 45
HOURS ANY ZONE BELOW HEATING THROTTLING RANGE = 0

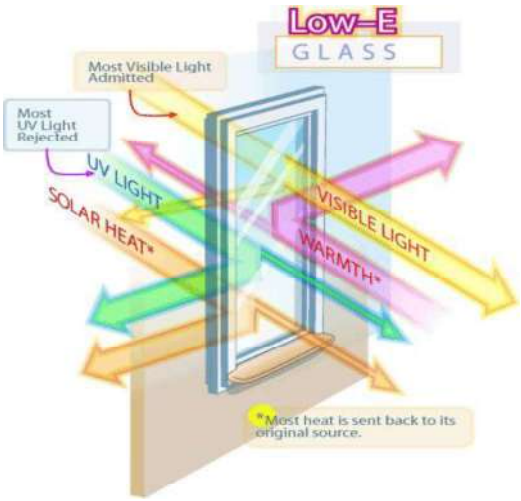
NOTE: ENERGY IS APPORTIONED HOURLY TO ALL END-USE CATEGORIES.

Daylight Analysis

Introduction

The commitment 4.2.3 of ECBC 2017 for ECBC Compliance Building is checked by computer simulation analysis. In the computer analysis method, the daylight analysis is done by creating a model in Design Builder and then simulating it further. A summary of daylight calculations is provided in Table 11. Simulation tool and UDI analysis image of each floor plate is attached below.

Daylight is a natural source of light, which meets all the requirements of good lighting while enhancing user efficiency and productivity. In India, daylight is available in plenty and can be used for satisfactory indoor illumination during the day. Day lighting plays a crucial role in developing comfortable indoor environmental quality. It reduces the need for electric lighting of building interiors, resulting in decreased energy use. Daylight penetration inside the living space depends entirely on the building design, i.e., the orientation, internal space arrangement, distribution of openings, size and shape of the openings, shading design and glazing properties, and so on.



For achieving utmost benefit of day lighting within a living space, the glass should be chosen in such a way that it allows maximum penetration of daylight to provide visual comfort to the inhabitants without producing glare. In addition to that, the glass should also restrict the heat of the sun from entering the space thereby reducing the cooling load of the space.

Objective

The prime intent of the criterion is to ensure connectivity between the interior and the exterior environment, by providing adequate day lighting within the living spaces. The analysis would help in:

- Optimizing the type of glass used
- Assessing the availability of daylight in living areas and finalizing the credit points as per the new buildings criteria.

Methodology-

In the computer analysis method, the daylight analysis is done by creating a model and then performing Analysis in Design Builder software. For day lighting analysis, the following design values have been considered during this process:

1. The model is designed considering that the sky is clear.
2. The day lighting simulation is done on a work plane of 800 mm height from finish floor level.

Executive Summary-

Project Name	New PWD Rest House
Project Type	Hospitality Building
Location	Hisar
Climate Type	Composite
Day lighted Area (%)	44.3 %
Simulation Tool Used	Design Builder

Daylight Analysis

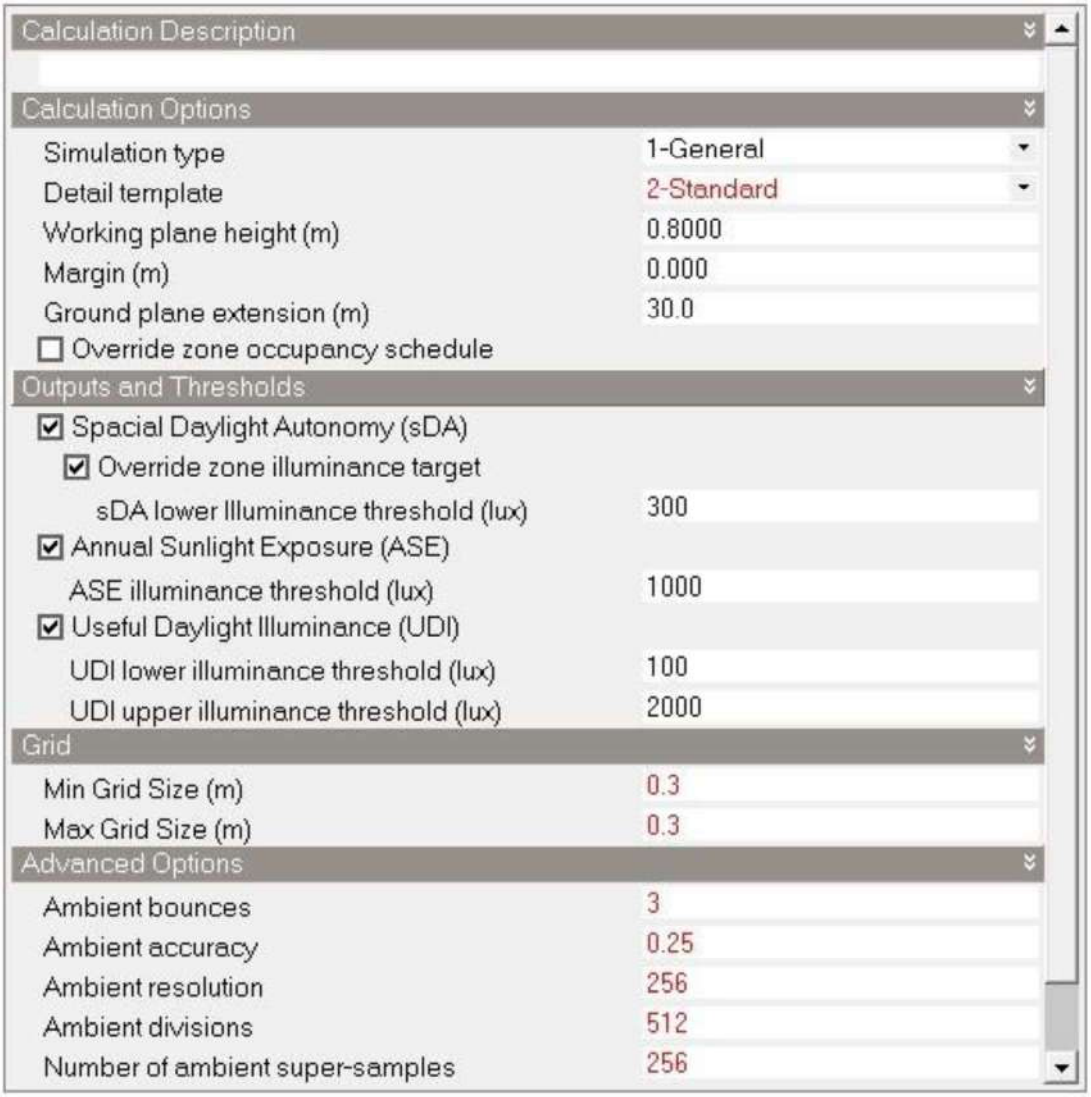
The commitment 4.2.3 of ECBC 2017 for Compliance Building is checked by computer simulation Analysis. In the computer analysis method, the daylight analysis is done by creating a model and then performing Analysis in Design Builder software. A summary of daylight calculations is provided in the Table below. Simulation tool and UDI Analysis image of each floor plate is attached below.

Table 9: Daylight Calculation

Floor Description	UDI
Ground Floor	47.0 %
First Floor	52.3 %
Second Floor	50.7 %
Third Floor	51.0 %
Total UDI of the Project	**50.2 %**
ECBC recommendation for building category	**30 %**

Design Builder Daylight Simulation Screenshots

Simulation Assumptions:



Simulated results:

Untitled, Building 1

Illuminance | Annual daylighting

Block	Zone	Floor Area (m2)	sDA Area in Range (m2)	sDA Area in Range (%)	ASE Area in Range (m2)	ASE Area in Range (%)	UDI Area in Range (m2)	UDI Area in Range (%)
Ground floor	Zone 1	2376.550	954.068	40.145	2008.825	84.527	1117.848	47.037
First floor	Zone 1	2168.905	973.007	44.862	1791.374	82.593	1133.511	52.262
Second floor	Zone 1	2052.387	925.029	45.071	1699.956	82.829	1040.371	50.691
Third floor	Zone 1	2052.387	945.060	46.047	1676.449	81.683	1047.414	51.034
Total		**8650.230**	**3797.164**	**43.897**	**7176.603**	**82.964**	**4339.144**	50.162

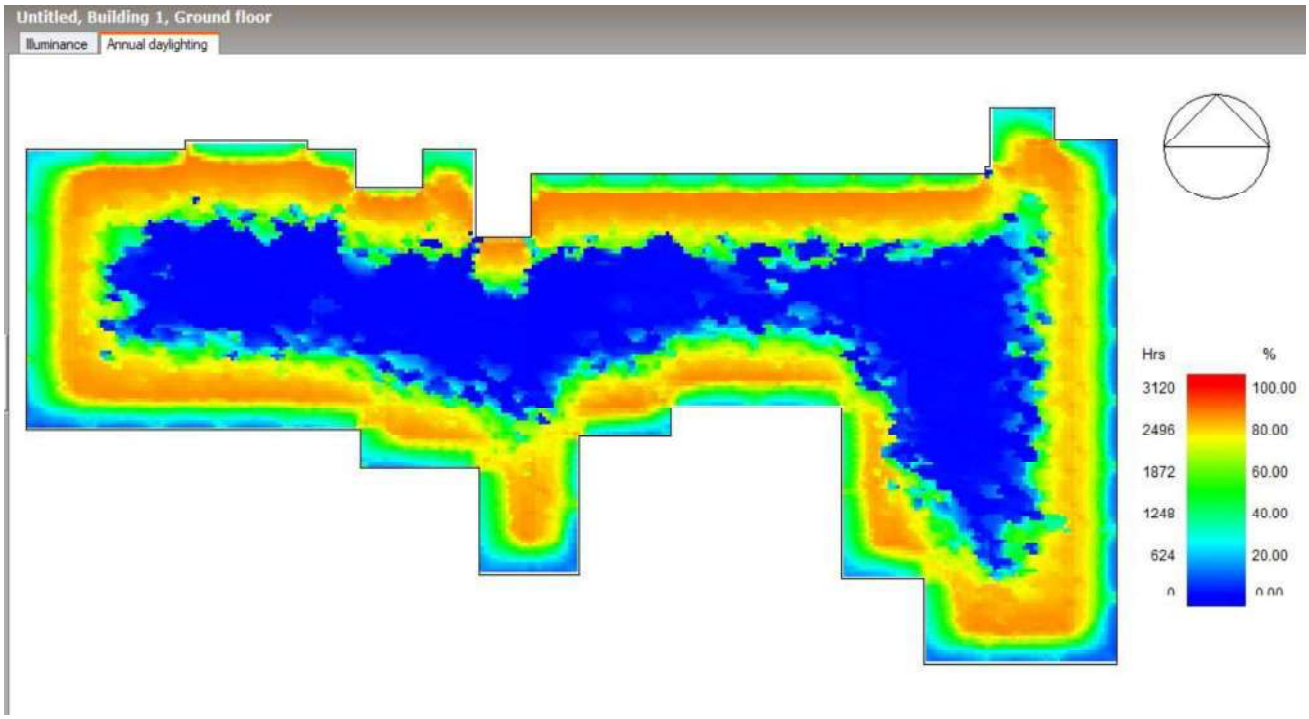


Figure 29: Ground Floor

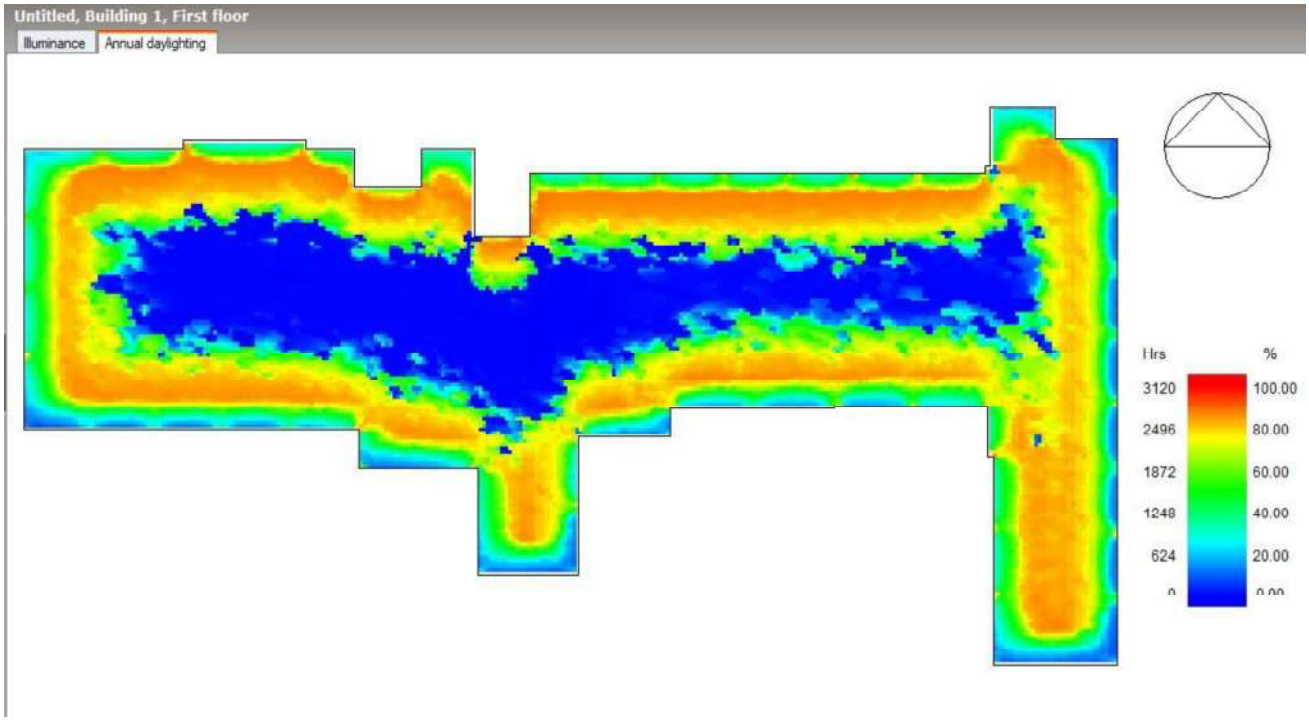


Figure 30: First Floor

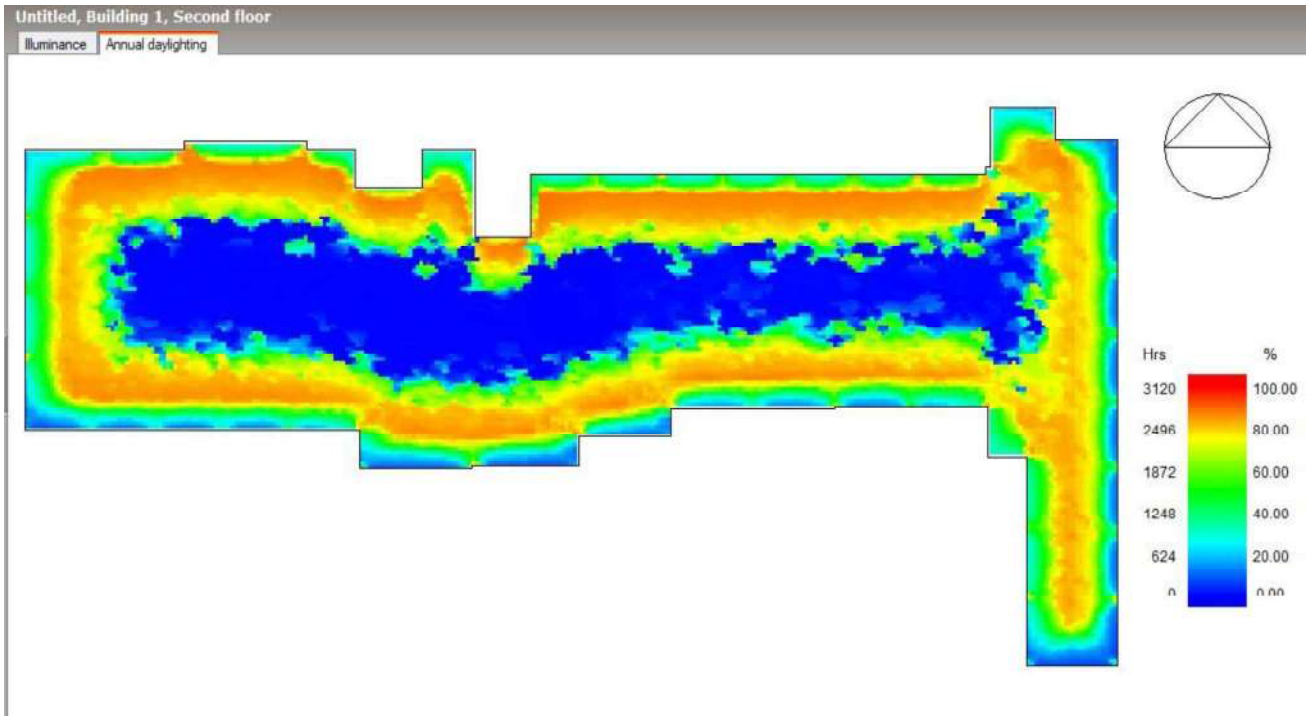


Figure 31: Second Floor

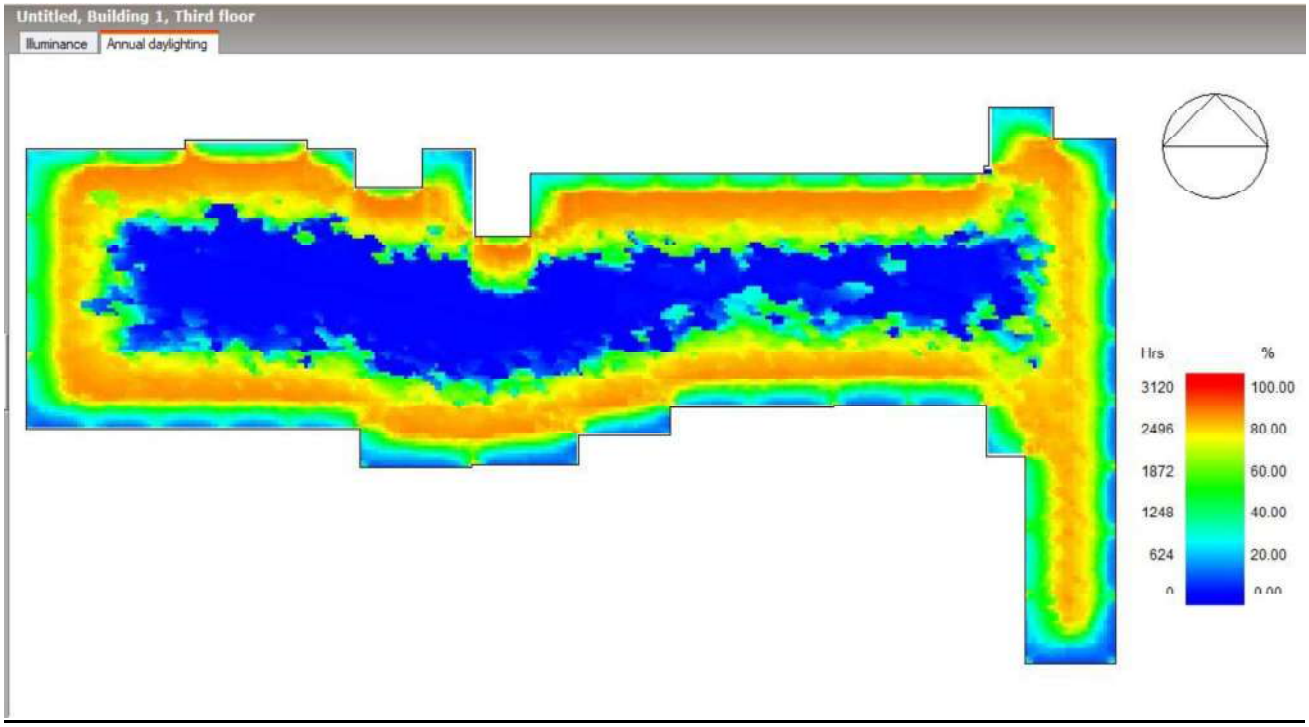


Figure 32: Third Floor

ECBC COMPLIANCE FORMS

ECBC Compliance Forms are placed at Annexure -4.

AP APPENDIX:

- Annexure 1 : Ventilation CFM and load calculation
- Annexure 2 : Solar PV generation calculation sheet from snapshot.
- Annexure 3 : Cut sheets
- Annexure 4 : Compliance Forms

Abbreviations

AAC	Autoclaved Aerated Concrete	mps	Meters Per Second
ACTI	Cooling Tower Institute	ODP	Ozone Depletion Potential
ANSI	American National Standards Institute	PCC	Pozzolana Cement Concrete
ASHRAE	American Society Of Heating, Refrigerating And Air-Conditioning Engineers	PCM	Phase Change Material
DEVap	Desiccant Enhanced Evaporative Air-Conditioning	PMV	Pulse Modulating Valve
ECBC	Energy Conservation Building Code	PUF	Polyurethane Foam
EEV	Electronic Expansion Valve	RCC	Reinforced Cement Concrete
GPM	Gallons Per Minute	TRIC	Thermally Resistant Insulated Concrete
GWP	Global Warming Potential	TXV	Thermostatic Expansion Valve
HR	Heat Recovery	VAV	Variable Air Volume
HVAC	Heating, Ventilation And Air Conditioning	VRF	Variable Refrigerant Flow
LCCA	Life Cycle Cost Analysis	VRV	Variable Refrigerant Volume
LDAC	Liquid-Desiccant Air Conditioner	wg	Water Gauge

Annexures

Annexure 1 : Ventilation CFM and load calculation

Baseline case

Block 1

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Design Ventilation Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Heat Hrs
EL1 Sys1 (PMZS) (G)	Pkgd Var Vol Var Temp	D	17,172	48,944	2.85	75%	2,136	4%	0.124	15.5	134	129	367	93.3	163.9	95	0
EL1 NNE Perim Zn (G.NNE1)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 East Perim Zn (G.E2)	Office (Open Plan) (33%)	U	171	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 NNW Perim Zn (G.NNW3)	Office (Open Plan) (33%)	U	514	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 NW Perim Zn (G.NW4)	Office (Open Plan) (44%)	U	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 NNW Perim Zn (G.NNW5)	Office (Open Plan) (44%)	C	7,724	14,109	1.83	7%	961	7%	0.124	22.4	36	216	394	55.7	130.6	9	0
EL1 East Perim Zn (G.E6)	Office (Open Plan) (44%)	S	1,583	7,142	4.51	100%	197	3%	0.124	22.4	18	87	394	137.5	203.1	8	0
EL1 East Perim Zn (G.E7)	Office (Open Plan) (44%)	S	84	612	7.30	100%	10	2%	0.124	22.4	2	54	394	222.4	278.3	2	0
EL1 Core Zn (G.C8)	Office (Open Plan) (44%)	S	174	1,137	6.54	100%	22	2%	0.124	22.4	3	60	394	199.2	257.7	35	0
EL1 Core Zn (G.C9)	Office (Open Plan) (33%)	U	677	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 East Perim Zn (G.E10)	Office (Open Plan) (33%)	U	976	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C11)	Office (Open Plan) (33%)	U	71	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C12)	Office (Open Plan) (33%)	U	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C13)	Office (Open Plan) (33%)	U	267	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 East Perim Zn (G.E14)	Office (Open Plan) (33%)	U	73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 SSE Perim Zn (G.SSE15)	Office (Open Plan) (33%)	U	406	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 SW Perim Zn (G.SW16)	Office (Open Plan) (33%)	U	419	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 SW Perim Zn (G.SW17)	Office (Open Plan) (33%)	U	1,298	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C18)	Office (Open Plan) (33%)	U	14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C19)	Office (Open Plan) (33%)	U	36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C20)	Office (Open Plan) (33%)	U	286	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C21)	Office (Open Plan) (33%)	U	13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 West Perim Zn (G.W22)	Office (Open Plan) (33%)	U	167	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 SSE Perim Zn (G.SSE23)	Office (Open Plan) (33%)	U	86	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C24)	Office (Open Plan) (33%)	U	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 South Perim Zn (G.S25)	Office (Open Plan) (44%)	S	87	569	6.58	100%	11	2%	0.124	22.4	1	80	394	200.6	258.9	4	0
EL1 Core Zn (G.C26)	Office (Open Plan) (33%)	U	380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C27)	Office (Open Plan) (33%)	U	35	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 East Perim Zn (G.E28)	Office (Open Plan) (33%)	U	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C29)	Office (Open Plan) (33%)	U	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 South Perim Zn (G.S30)	Office (Open Plan) (33%)	U	808	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C31)	Office (Open Plan) (33%)	U	125	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 SSW Perim Zn (G.SSW32)	Office (Open Plan) (44%)	S	842	5,597	6.64	100%	105	2%	0.124	22.4	14	59	394	202.6	260.7	22	0
EL1 NE Perim Zn (G.NE33)	Office (Open Plan) (33%)	U	469	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 North Perim Zn (G.N34)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C35)	Office (Open Plan) (33%)	U	182	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 North Perim Zn (G.N36)	Office (Open Plan) (44%)	S	4,493	13,118	2.92	100%	559	4%	0.124	22.4	33	135	394	89.0	160.1	1	0
EL1 Core Zn (G.C37)	Office (Open Plan) (33%)	U	22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 Core Zn (G.C38)	Office (Open Plan) (44%)	S	273	1,469	5.38	100%	34	2%	0.124	22.4	4	73	394	164.1	226.6	5	0
EL1 North Perim Zn (G.N39)	Office (Open Plan) (44%)	S	181	730	4.03	100%	23	3%	0.124	22.4	2	98	394	122.7	189.9	9	0
EL1 WNW Perim Zn (G.WNW40)	Office (Open Plan) (33%)	U	462	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 NNE Perim Zn (G.NNE41)	Office (Open Plan) (44%)	U	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
EL1 NNW Perim Zn (G.NNW42)	Office (Open Plan) (44%)	U	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

System & Zone Name	System Type Principal Zone Activity	Type* Ret	Type* Zn	Area sqft	Design Flow Supply cfm	Design Flow Supply cfm/sf	Design Ventilation Min Flow	Design Ventilation OSA cfm	Design Ventilation OSA %	Design Ventilation OSA cfm/sf	Design Capacity OSA cfm/per	Design Capacity Cool tons	Design Capacity Cool sf/ton	Design Capacity Cool cfm/ton	Design Capacity Cool Btuh/sf	Design Capacity Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Hrs Outside Thrl-Range Heat Hrs
EL2 Sys2 (PMZS) (G)	Pkgd Var Vol Var Temp	D		5,149	25,385	4.93	92%	643	3%	0.125	5.3	65	79	389	152.1	278.9	122	0
··· EL2 NNE Perim Zn (G.NNE1)	Office (Open Plan) (38%)	U		132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E2)	Office (Open Plan) (38%)	U		169	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 NNW Perim Zn (G.NNW3)	Office (Open Plan) (38%)	U		513	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 SW Perim Zn (G.SW4)	Office (Open Plan) (38%)	U		27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 WSW Perim Zn (G.WSW5)	Office (Open Plan) (38%)	U		261	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C6)	Office (Open Plan) (38%)	U		287	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E7)	Office (Open Plan) (38%)	U		73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 SSE Perim Zn (G.SSE8)	Office (Open Plan) (38%)	U		406	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E9)	Office (Open Plan) (38%)	U		11,077	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C10)	Office (Open Plan) (38%)	U		11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N11)	Office (Open Plan) (38%)	U		251	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 NNW Perim Zn (G.NNW12)	Office (Open Plan) (38%)	U		489	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N13)	Office (Open Plan) (38%)	U		138	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C14)	Office (Open Plan) (38%)	U		190	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 NNE Perim Zn (G.NNE15)	Office (Open Plan) (47%)	C		871	2,252	2.58	5%	109	5%	0.125	21.5	5	161	415	74.7	206.5	12	0
··· EL2 Core Zn (G.C16)	Office (Open Plan) (38%)	U		20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N17)	Office (Open Plan) (47%)	S		306	1,308	4.27	100%	38	3%	0.125	21.5	3	97	415	123.3	251.9	0	0
··· EL2 Core Zn (G.C18)	Office (Open Plan) (47%)	S		79	860	10.94	100%	10	1%	0.125	21.5	2	38	415	316.2	432.2	0	0
··· EL2 Core Zn (G.C19)	Office (Open Plan) (38%)	U		99	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C20)	Office (Open Plan) (38%)	U		25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N21)	Office (Open Plan) (47%)	S		453	1,663	3.67	100%	57	3%	0.125	21.5	4	113	415	106.0	235.8	0	0
··· EL2 NNW Perim Zn (G.NNW22)	Office (Open Plan) (47%)	S		561	1,810	3.22	100%	70	4%	0.125	21.5	4	129	415	93.1	223.7	1	0
··· EL2 West Perim Zn (G.W23)	Office (Open Plan) (47%)	S		89	526	5.89	100%	11	2%	0.125	21.5	1	70	415	170.3	295.8	0	0
··· EL2 Core Zn (G.C24)	Office (Open Plan) (47%)	S		81	288	3.53	100%	10	4%	0.125	21.5	1	118	415	102.1	232.1	0	0
··· EL2 Core Zn (G.C25)	Office (Open Plan) (38%)	U		195	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C26)	Office (Open Plan) (38%)	U		24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C27)	Office (Open Plan) (38%)	U		2,446	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C28)	Office (Open Plan) (38%)	U		24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C29)	Office (Open Plan) (38%)	U		90	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 West Perim Zn (G.W30)	Office (Open Plan) (47%)	S		87	1,205	13.87	100%	11	1%	0.125	21.5	3	30	415	400.6	511.0	0	0
··· EL2 SW Perim Zn (G.SW31)	Office (Open Plan) (47%)	S		298	1,455	4.89	100%	37	3%	0.125	21.5	4	85	415	141.1	268.6	1	0
··· EL2 South Perim Zn (G.S32)	Office (Open Plan) (38%)	U		426	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C33)	Office (Open Plan) (38%)	U		24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C34)	Office (Open Plan) (38%)	U		97	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C35)	Office (Open Plan) (38%)	U		102	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S36)	Office (Open Plan) (47%)	S		397	2,875	7.23	100%	50	2%	0.125	21.5	7	57	415	209.0	332.0	1	0
··· EL2 South Perim Zn (G.S37)	Office (Open Plan) (47%)	S		323	2,716	8.40	100%	40	1%	0.125	21.5	7	49	415	242.8	383.6	92	0
··· EL2 South Perim Zn (G.S38)	Office (Open Plan) (47%)	S		383	3,018	7.88	100%	48	2%	0.125	21.5	7	53	415	227.7	349.5	0	0
··· EL2 Core Zn (G.C39)	Office (Open Plan) (38%)	U		58	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C40)	Office (Open Plan) (38%)	U		24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S41)	Office (Open Plan) (47%)	S		439	2,414	5.50	100%	55	2%	0.125	21.5	6	75	415	159.0	285.3	14	0
··· EL2 Core Zn (G.C42)	Office (Open Plan) (38%)	U		104	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C43)	Office (Open Plan) (38%)	U		73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 SSW Perim Zn (G.SSW44)	Office (Open Plan) (47%)	S		412	2,213	5.36	100%	51	2%	0.125	21.5	5	77	415	155.0	281.5	1	0
··· EL2 South Perim Zn (G.S45)	Office (Open Plan) (47%)	S		368	2,515	6.83	100%	46	2%	0.125	21.5	6	61	415	197.3	321.1	0	0
··· EL2 South Perim Zn (G.S46)	Office (Open Plan) (38%)	U		44	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C43)	Office (Open Plan) (33%)	U		103	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C44)	Office (Open Plan) (33%)	U		73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C45)	Office (Open Plan) (33%)	U		24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C46)	Office (Open Plan) (33%)	U		24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S47)	Office (Open Plan) (44%)	S		1,299	7,300	5.62	100%	162	2%	0.124	22.4	19	70	394	171.4	233.0	0	0
··· EL1 Core Zn (G.C48)	Office (Open Plan) (33%)	U		26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S49)	Office (Open Plan) (44%)	S		432	782	1.81	100%	54	7%	0.124	22.4	2	217	394	55.2	130.2	0	0
··· EL1 South Perim Zn (G.S50)	Office (Open Plan) (33%)	U		433	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 WSW Perim Zn (G.WSW51)	Office (Open Plan) (33%)	U		430	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Pl Zn (G.52)	(unknown)	U		26,572	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	··	52,565	··	··	··	··	··	··	134	··	··	··	··	1%	0%
Sum of Zones / System Total	··	··	··	··	107%	··	··	··	··	··	··	100%	··	··	··	··	··	··

Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

··· EL2 ESE Perim Zn (G.ESE47)	Office (Open Plan) (38%)	U	380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 PI Zn (G.48)	(unknown)	U	23,431	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	--	--	--	27,116	--	--	--	--	--	--	65	--	--	--	--	1%	0%
Sum of Zones / System Total	--	--	--	107%	--	--	--	--	--	--	100%	--	--	--	--	--	--

Return Types: '' 'P' = Plenum Return '' 'D' = Ducted Return '' 'd' = Direct return '' (Plenum Zones are not shown on this report)
Zone Types: '' 'C' = Conditioned Zone '' 'U' = Unconditioned Zone '' 'S' = Slave Zone '' (conditioned but no t-stat)

		Type*		Design Flow			Design Ventilation			Design Capacity						Hrs Outside Thrl-Range	
System & Zone Name	System Type Principal Zone Activity	Ret Zn	Area sqft	Supply cfm	Supply cfm/sf	Min Flow	OSA cfm	OSA %	OSA cfm/sf	OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Cool Hrs	Heat Hrs
EL3 Sys3 (PMZS) (G)	Pkgd Var Vol Var Temp	D	11,467	16,535	1.44	98%	1,352	8%	0.118	11.2	47	245	353	49.1	79.3	56	0
··· EL3 NNE Perim Zn (G.NNE1)	Office (Open Plan) (32%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 East Perim Zn (G.E2)	Office (Open Plan) (32%)	U	171	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 NNW Perim Zn (G.NNW3)	Office (Open Plan) (32%)	U	514	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N4)	Office (Open Plan) (49%)	C	308	312	1.01	12%	36	12%	0.118	19.5	1	349	353	34.4	67.7	0	0
··· EL3 Core Zn (G.C5)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C6)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N7)	Office (Open Plan) (49%)	S	1,992	2,108	1.06	100%	235	11%	0.118	19.5	6	333	353	36.0	68.9	0	0
··· EL3 Core Zn (G.C8)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C9)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C10)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C11)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C12)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C13)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N14)	Office (Open Plan) (49%)	S	367	468	1.28	100%	43	9%	0.118	19.5	1	277	353	43.4	74.8	0	0
··· EL3 Core Zn (G.C15)	Office (Open Plan) (32%)	U	16	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C16)	Office (Open Plan) (32%)	U	12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N17)	Office (Open Plan) (32%)	U	249	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 NNW Perim Zn (G.NNW18)	Office (Open Plan) (32%)	U	489	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N19)	Office (Open Plan) (32%)	U	138	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C20)	Office (Open Plan) (32%)	U	190	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 NE Perim Zn (G.NE21)	Office (Open Plan) (49%)	S	441	444	1.01	100%	52	12%	0.118	19.5	1	350	353	34.2	67.5	0	0
··· EL3 Core Zn (G.C22)	Office (Open Plan) (32%)	U	94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C23)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N24)	Office (Open Plan) (49%)	S	361	365	1.01	100%	43	12%	0.118	19.5	1	349	353	34.4	67.6	0	0
··· EL3 North Perim Zn (G.N25)	Office (Open Plan) (49%)	S	434	438	1.01	100%	51	12%	0.118	19.5	1	350	353	34.3	67.6	0	0
··· EL3 Core Zn (G.C26)	Office (Open Plan) (32%)	U	94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C27)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N28)	Office (Open Plan) (49%)	S	359	363	1.01	100%	42	12%	0.118	19.5	1	349	353	34.4	67.7	0	0
··· EL3 North Perim Zn (G.N29)	Office (Open Plan) (49%)	S	436	439	1.01	100%	51	12%	0.118	19.5	1	350	353	34.3	67.6	0	0
··· EL3 WNW Perim Zn (G.WNW30)	Office (Open Plan) (49%)	S	360	505	1.40	100%	42	8%	0.118	19.5	1	251	353	47.7	78.3	0	0
··· EL3 Core Zn (G.C31)	Office (Open Plan) (32%)	U	94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C32)	Office (Open Plan) (32%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C33)	Office (Open Plan) (32%)	U	2,174	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C34)	Office (Open Plan) (32%)	U	26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C35)	Office (Open Plan) (32%)	U	92	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 WSW Perim Zn (G.WSW36)	Office (Open Plan) (49%)	S	357	734	2.06	100%	42	6%	0.118	19.5	2	172	353	69.9	95.9	17	0
··· EL3 South Perim Zn (G.S37)	Office (Open Plan) (32%)	U	425	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C38)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C39)	Office (Open Plan) (32%)	U	193	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S40)	Office (Open Plan) (49%)	S	705	1,488	2.11	100%	83	6%	0.118	19.5	4	167	353	71.8	97.3	0	0
··· EL3 Core Zn (G.C41)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S42)	Office (Open Plan) (49%)	S	433	718	1.66	100%	51	7%	0.118	19.5	2	213	353	56.4	85.1	17	0
··· EL3 Core Zn (G.C43)	Office (Open Plan) (32%)	U	100	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S44)	Office (Open Plan) (49%)	S	356	788	2.21	100%	42	5%	0.118	19.5	2	160	353	75.2	100.1	10	0

··· EL3 Core Zn (G.C45)	Office (Open Plan) (32%)	U	81	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C46)	Office (Open Plan) (32%)	U	80	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S47)	Office (Open Plan) (32%)	U	354	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S48)	Office (Open Plan) (49%)	S	459	1,137	2.48	100%	54	5%	0.118	19.5	3	142	353	84.3	107.3	0	0	
··· EL3 SE Perim Zn (G.SE49)	Office (Open Plan) (32%)	U	396	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 SW Perim Zn (G.SW50)	Office (Open Plan) (32%)	U	44	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S51)	Office (Open Plan) (49%)	S	316	892	2.83	100%	37	4%	0.118	19.5	3	125	353	96.2	116.7	0	0	
··· EL3 South Perim Zn (G.S52)	Office (Open Plan) (49%)	S	1,984	2,798	1.41	100%	234	8%	0.118	19.5	8	250	353	48.0	78.4	5	0	
··· EL3 Core Zn (G.C53)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C54)	Office (Open Plan) (32%)	U	141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C55)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C56)	Office (Open Plan) (32%)	U	141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C57)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C58)	Office (Open Plan) (32%)	U	141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 WSW Perim Zn (G.WSW59)	Office (Open Plan) (32%)	U	2,347	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C60)	Office (Open Plan) (32%)	U	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C61)	Office (Open Plan) (32%)	U	126	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C62)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C63)	Office (Open Plan) (32%)	U	60	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C64)	Office (Open Plan) (32%)	U	387	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C65)	Office (Open Plan) (32%)	U	33	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 WSW Perim Zn (G.WSW66)	Office (Open Plan) (32%)	U	349	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 East Perim Zn (G.E67)	Office (Open Plan) (49%)	S	364	618	1.70	100%	43	7%	0.118	19.5	2	208	353	57.8	86.2	7	0	
··· EL3 East Perim Zn (G.E68)	Office (Open Plan) (49%)	S	1,433	1,924	1.34	100%	169	9%	0.118	19.5	5	263	353	45.7	76.6	0	0	
··· EL3 Core Zn (G.C69)	Office (Open Plan) (32%)	U	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C70)	Office (Open Plan) (32%)	U	126	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C71)	Office (Open Plan) (32%)	U	61	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C72)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C73)	Office (Open Plan) (32%)	U	291	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 East Perim Zn (G.E74)	Office (Open Plan) (32%)	U	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S75)	Office (Open Plan) (32%)	U	385	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Pl Zn (G.76)	(unknown)	U	23,282	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	16,538	··	··	··	··	··	··	47	··	··	··	··	1%	0%	
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··	

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

		Type*		Design Flow			Design Ventilation			Design Capacity						Hrs Outside Thrl-Range	
System & Zone Name	System Type Principal Zone Activity	Ret Zn	Area sqft	Supply cfm	Supply cfm/sf	Min Flow	OSA cfm	OSA %	OSA cfm/sf	OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Cool Hrs	Heat Hrs
EL4 Sys4 (PMZS) (G)	Pkgd Var Vol Var Temp	D	11,554	24,073	2.08	97%	1,361	6%	0.118	11.3	70	164	342	73.1	123.9	102	0
··· EL4 NNE Perim Zn (G.NNE1)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E2)	Office (Open Plan) (33%)	U	171	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNW Perim Zn (G.NNW3)	Office (Open Plan) (33%)	U	514	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NW Perim Zn (G.NW4)	Office (Open Plan) (48%)	U	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 WSW Perim Zn (G.WSW5)	Office (Open Plan) (33%)	U	1,513	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E6)	Office (Open Plan) (48%)	C	360	892	2.48	5%	42	5%	0.118	19.6	2	152	377	78.8	128.8	6	0
··· EL4 East Perim Zn (G.E7)	Office (Open Plan) (48%)	S	686	1,896	2.77	100%	81	4%	0.118	19.6	5	136	377	88.0	136.5	30	0
··· EL4 Core Zn (G.C8)	Office (Open Plan) (33%)	U	21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E9)	Office (Open Plan) (48%)	S	287	612	2.13	100%	34	6%	0.118	19.6	2	177	377	67.7	119.4	0	0
··· EL4 East Perim Zn (G.E10)	Office (Open Plan) (48%)	S	311	612	1.97	100%	37	6%	0.118	19.6	2	192	377	62.6	115.0	0	0
··· EL4 East Perim Zn (G.E11)	Office (Open Plan) (48%)	S	311	892	2.87	100%	37	4%	0.118	19.6	2	131	377	91.3	139.4	0	0
··· EL4 Core Zn (G.C12)	Office (Open Plan) (33%)	U	21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C13)	Office (Open Plan) (33%)	U	278	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E14)	Office (Open Plan) (33%)	U	73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C15)	Office (Open Plan) (33%)	U	22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S16)	Office (Open Plan) (33%)	U	406	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C17)	Office (Open Plan) (33%)	U	32	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 WSW Perim Zn (G.WSW18)	Office (Open Plan) (33%)	U	347	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S19)	Office (Open Plan) (48%)	S	1,676	3,673	2.19	100%	197	5%	0.118	19.6	10	172	377	69.7	121.0	0	0
··· EL4 North Perim Zn (G.N20)	Office (Open Plan) (33%)	U	689	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N21)	Office (Open Plan) (48%)	S	638	1,837	2.88	100%	75	4%	0.118	19.6	5	131	377	91.6	139.6	12	0

··· EL4 Core Zn (G.C22)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C23)	Office (Open Plan) (33%)	U	139	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C24)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C25)	Office (Open Plan) (33%)	U	139	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N26)	Office (Open Plan) (48%)	S	1,165	2,117	1.79	100%	140	7%	0.118	19.6	6	211	377	56.6	110.1	19	0	
··· EL4 North Perim Zn (G.N27)	Office (Open Plan) (48%)	S	287	1,137	3.97	100%	34	3%	0.118	19.6	3	95	377	126.2	169.0	0	0	
··· EL4 Core Zn (G.C28)	Office (Open Plan) (33%)	U	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C29)	Office (Open Plan) (33%)	U	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C30)	Office (Open Plan) (33%)	U	1,372	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C31)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C32)	Office (Open Plan) (33%)	U	75	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C33)	Office (Open Plan) (33%)	U	66	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C34)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S35)	Office (Open Plan) (48%)	S	552	1,488	2.69	100%	65	4%	0.118	19.6	4	140	377	85.7	134.6	30	0	
··· EL4 South Perim Zn (G.S36)	Office (Open Plan) (48%)	S	683	1,924	2.82	100%	80	4%	0.118	19.6	5	134	377	89.6	137.9	0	0	
··· EL4 Core Zn (G.C37)	Office (Open Plan) (33%)	U	12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N38)	Office (Open Plan) (33%)	U	249	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNW Perim Zn (G.NNW39)	Office (Open Plan) (33%)	U	489	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N40)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C41)	Office (Open Plan) (33%)	U	181	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNE Perim Zn (G.NNE42)	Office (Open Plan) (48%)	S	910	1,488	1.63	100%	107	7%	0.118	19.6	4	231	377	52.0	106.0	3	0	
··· EL4 Core Zn (G.C43)	Office (Open Plan) (33%)	U	20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNW Perim Zn (G.NNW44)	Office (Open Plan) (48%)	S	1,265	2,274	1.80	100%	149	7%	0.118	19.6	6	210	377	57.1	110.4	0	0	
··· EL4 Core Zn (G.C45)	Office (Open Plan) (33%)	U	199	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C46)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C47)	Office (Open Plan) (48%)	S	155	612	3.95	100%	18	3%	0.118	19.6	2	95	377	125.8	168.6	0	0	
··· EL4 Core Zn (G.C48)	Office (Open Plan) (33%)	U	199	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C49)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C50)	Office (Open Plan) (33%)	U	2,079	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 ESE Perim Zn (G.ESE51)	Office (Open Plan) (33%)	U	391	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 SW Perim Zn (G.SW52)	Office (Open Plan) (33%)	U	44	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S53)	Office (Open Plan) (48%)	S	459	1,137	2.48	100%	54	5%	0.118	19.6	3	152	377	78.9	128.8	0	0	
··· EL4 South Perim Zn (G.S54)	Office (Open Plan) (33%)	U	354	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C55)	Office (Open Plan) (33%)	U	80	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C56)	Office (Open Plan) (33%)	U	103	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S57)	Office (Open Plan) (48%)	S	1,411	2,887	2.05	100%	166	6%	0.118	19.6	8	184	377	65.0	117.1	0	0	
··· EL4 Core Zn (G.C58)	Office (Open Plan) (33%)	U	193	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C59)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C60)	Office (Open Plan) (33%)	U	193	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C61)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S62)	Office (Open Plan) (33%)	U	411	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C63)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C64)	Office (Open Plan) (33%)	U	102	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 WSW Perim Zn (G.WSW65)	Office (Open Plan) (48%)	S	378	1,067	2.82	100%	45	4%	0.118	19.6	3	134	377	89.7	138.0	2	0	
··· EL4 PI Zn (G.66)	(unknown)	U	23,329	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	26,547	··	··	··	··	··	··	70	··	··	··	··	1%	0%	
Sum of Zones / System Total	··	··	··	110%	··	··	··	··	··	··	100%	··	··	··	··	··	··	

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Project Totals

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Min Flow	Design Ventilation OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Throttling Range Hrs Outside Thrl-Range
Sum of SYSTEMs	··	··	45,341	114,937	2.53	87%	5,493	5%	0.121	11.0	316	143	364	83.7	145.4	3%
Sum of ZONEs	··	··	··	122,766	2.71	··	··	··	··	··	316	··	··	··	··	··
Sum of Zones / System Total	··	··	··	107%	··	··	··	··	··	··	100%	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Block 2

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Min Flow	Design Ventilation OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Heat Hrs
EL1 Sys1 (PMZS) (G)	Pkgd Var Vol Var Temp	d	13,280	22,147	1.67	57%	1,601	7%	0.121	18.2	54	247	412	48.5	79.8	338	0
··· EL1 East Perim Zn (G.E1)	Office (Executive/Private) (72%)	U	588	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E2)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C3)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 West Perim Zn (G.W4)	Office (Executive/Private) (72%)	C	6,256	9,067	1.45	8%	754	8%	0.121	22.8	25	247	358	48.5	79.8	170	0
··· EL1 East Perim Zn (G.E5)	Office (Executive/Private) (72%)	U	452	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 North Perim Zn (G.N6)	Office (Executive/Private) (72%)	U	298	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S7)	Office (Executive/Private) (72%)	U	162	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S8)	Office (Executive/Private) (72%)	U	123	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E9)	Office (Executive/Private) (72%)	S	7,030	10,191	1.45	100%	847	8%	0.121	22.8	28	247	358	48.5	79.8	168	0
··· EL1 Core Zn (G.C10)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E11)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 West Perim Zn (G.W12)	Office (Executive/Private) (72%)	U	588	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Pl Zn (G.13)	(unknown)	U	16,990	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	19,258	··	··	··	··	··	··	54	··	··	··	··	13%	0%
Sum of Zones / System Total	··	··	··	87%	··	··	··	··	··	··	100%	··	··	··	··	··	··

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Min Flow	Design Ventilation OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Heat Hrs
EL2 Sys2 (PMZS) (G)	Pkgd Var Vol Var Temp	d	13,290	20,603	1.55	57%	1,601	8%	0.120	18.2	51	262	406	45.9	74.5	136	10
··· EL2 East Perim Zn (G.E1)	Office (Executive/Private) (72%)	U	588	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E2)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C3)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 West Perim Zn (G.W4)	Office (Executive/Private) (72%)	C	6,256	8,396	1.34	9%	754	9%	0.120	22.8	24	263	353	45.7	74.3	69	5
··· EL2 East Perim Zn (G.E5)	Office (Executive/Private) (72%)	U	452	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N6)	Office (Executive/Private) (72%)	U	286	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S7)	Office (Executive/Private) (72%)	U	169	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S8)	Office (Executive/Private) (72%)	U	129	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E9)	Office (Executive/Private) (72%)	S	7,034	9,520	1.35	100%	848	9%	0.120	22.8	27	261	353	46.1	74.6	67	5
··· EL2 Core Zn (G.C10)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E11)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 West Perim Zn (G.W12)	Office (Executive/Private) (72%)	U	586	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Pl Zn (G.13)	(unknown)	U	16,992	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	17,916	··	··	··	··	··	··	51	··	··	··	··	5%	0%
Sum of Zones / System Total	··	··	··	87%	··	··	··	··	··	··	100%	··	··	··	··	··	··

Project Totals		Type*		Design Flow			Design Ventilation			Design Capacity						Throttling Range	
System & Zone Name	System Type Principal Zone Activity	Ret Zn	Area sqft	Supply cfm	Supply cfm/sf	Min Flow	OSA cfm	OSA %	OSA cfm/sf	OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range	
Sum of SYSTEMs	··	··	26,577	42,750	1.61	57%	3,202	8%	0.120	18.2	105	254	409	47.2	77.1	7%	
Sum of ZONEs	··	··	··	37,174	1.40	··	··	··	··	··	105	··	··	··	··	··	
Sum of Zones / System Total	··	··	··	87%	··	··	··	··	··	··	100%	··	··	··	··	··	

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Block 3

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow: Supply cfm	Supply cfm/sf	Design Ventilation: Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity: OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range: Cool Hrs	Heat Hrs
EL1 Sys1 (PMZS) (G)	Pkgd Var Vol Var Temp	d	5,642	5,609	0.99	13%	712	13%	0.126	19.5	18	315	313	38.1	56.2	0	0
··· EL1 Core Zn (G.C1)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C2)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C3)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C4)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C5)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C6)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C7)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C8)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 West Perim Zn (G.W9)	Office (Executive/Private) (85%)	U	176	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 NE Perim Zn (G.NE10)	Office (Executive/Private) (85%)	C	5,642	5,609	0.99	13%	712	13%	0.126	21.3	18	315	313	38.1	56.2	0	0
··· EL1 Pl Zn (G.11)	(unknown)	U	7,034	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	5,609	··	··	··	··	··	··	18	··	··	··	··	0%	0%
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··

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* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow: Supply cfm	Supply cfm/sf	Design Ventilation: Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity: OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range: Cool Hrs	Heat Hrs
EL2 Sys2 (PMZS) (G)	Pkgd Var Vol Var Temp	d	8,560	8,205	0.96	12%	1,017	12%	0.119	22.9	26	330	316	38.4	54.1	106	0
··· EL2 East Perim Zn (G.E1)	Office (Executive/Private) (70%)	C	8,560	8,205	0.96	12%	1,017	12%	0.119	22.9	26	330	316	38.4	54.1	106	0
··· EL2 Pl Zn (G.2)	(unknown)	U	8,560	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	8,205	··	··	··	··	··	··	26	··	··	··	··	2%	0%
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Project Totals		Type*		Design Flow		Design Ventilation				Design Capacity						Throttling Range	
System & Zone Name	System Type Principal Zone Activity	Ret Zn	Area sqft	Supply cfm	Supply cfm/sf	Min Flow	OSA cfm	OSA %	OSA cfm/sf	OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range	
Sum of SYSTEMs	··	··	14,202	13,813	0.97	13%	1,729	13%	0.122	21.4	44	324	315	37.0	55.0	2%	
Sum of ZONEs	··	··	··	13,813	0.97	··	··	··	··	··	44	··	··	··	··	··	
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Proposed case

Block 1

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Design Ventilation Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Hrs Outside Thrl-Range Heat Btuh/sf	Cool Hrs	Heat Hrs
EL1 Sys1 (PMZS) (G)	Pkgd Var Vol Var Temp	D	17,172	20,610	1.20	73%	2,136	10%	0.124	15.5	62	279	335	43.0	66.9	82	0
··· EL1 NNE Perim Zn (G.NNE1)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E2)	Office (Open Plan) (33%)	U	171	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 NNW Perim Zn (G.NNW3)	Office (Open Plan) (33%)	U	514	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 NW Perim Zn (G.NW4)	Office (Open Plan) (44%)	U	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 NNW Perim Zn (G.NNW5)	Office (Open Plan) (44%)	C	7,724	6,500	0.84	15%	961	15%	0.124	22.4	19	398	335	30.1	57.2	25	0
··· EL1 East Perim Zn (G.E6)	Office (Open Plan) (44%)	S	1,583	2,750	1.74	100%	197	7%	0.124	22.4	8	193	335	62.2	81.4	0	0
··· EL1 East Perim Zn (G.E7)	Office (Open Plan) (44%)	S	84	350	4.17	100%	10	3%	0.124	22.4	1	80	335	149.5	147.2	10	0
··· EL1 Core Zn (G.C8)	Office (Open Plan) (44%)	S	174	1,050	6.03	100%	22	2%	0.124	22.4	3	56	335	216.1	197.4	1	0
··· EL1 Core Zn (G.C9)	Office (Open Plan) (33%)	U	677	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E10)	Office (Open Plan) (33%)	U	978	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C11)	Office (Open Plan) (33%)	U	71	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C12)	Office (Open Plan) (33%)	U	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C13)	Office (Open Plan) (33%)	U	267	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E14)	Office (Open Plan) (33%)	U	73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 SSE Perim Zn (G.SSE15)	Office (Open Plan) (33%)	U	406	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 SW Perim Zn (G.SW16)	Office (Open Plan) (33%)	U	419	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 SW Perim Zn (G.SW17)	Office (Open Plan) (33%)	U	1,298	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C18)	Office (Open Plan) (33%)	U	14	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C19)	Office (Open Plan) (33%)	U	36	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C20)	Office (Open Plan) (33%)	U	286	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C21)	Office (Open Plan) (33%)	U	13	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 West Perim Zn (G.W22)	Office (Open Plan) (33%)	U	167	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 SSE Perim Zn (G.SSE23)	Office (Open Plan) (33%)	U	86	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C24)	Office (Open Plan) (33%)	U	5	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S25)	Office (Open Plan) (44%)	S	87	210	2.43	100%	11	5%	0.124	22.4	1	138	335	87.0	100.1	20	0
··· EL1 Core Zn (G.C26)	Office (Open Plan) (33%)	U	380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C27)	Office (Open Plan) (33%)	U	35	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E28)	Office (Open Plan) (33%)	U	7	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C29)	Office (Open Plan) (33%)	U	8	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S30)	Office (Open Plan) (33%)	U	808	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C31)	Office (Open Plan) (33%)	U	125	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 SSW Perim Zn (G.SSW32)	Office (Open Plan) (44%)	S	842	1,850	2.20	100%	105	6%	0.124	22.4	6	153	335	78.7	93.8	0	0
··· EL1 NE Perim Zn (G.NE33)	Office (Open Plan) (33%)	U	469	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 North Perim Zn (G.N34)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C35)	Office (Open Plan) (33%)	U	182	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 North Perim Zn (G.N36)	Office (Open Plan) (44%)	S	4,493	4,100	0.91	100%	559	14%	0.124	22.4	12	367	335	32.7	59.2	0	0
··· EL1 Core Zn (G.C37)	Office (Open Plan) (33%)	U	22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C38)	Office (Open Plan) (44%)	S	273	620	2.27	100%	34	5%	0.124	22.4	2	147	335	81.4	95.9	5	0
··· EL1 North Perim Zn (G.N39)	Office (Open Plan) (44%)	S	181	380	2.09	100%	23	6%	0.124	22.4	1	160	335	75.0	91.1	11	0
··· EL1 WNW Perim Zn (G.WNW40)	Office (Open Plan) (33%)	U	402	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 NNE Perim Zn (G.NNE41)	Office (Open Plan) (44%)	U	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 NNW Perim Zn (G.NNW42)	Office (Open Plan) (44%)	U	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C43)	Office (Open Plan) (33%)	U	103	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C44)	Office (Open Plan) (33%)	U	73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C45)	Office (Open Plan) (33%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C46)	Office (Open Plan) (33%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S47)	Office (Open Plan) (44%)	S	1,299	2,150	1.66	100%	162	8%	0.124	22.4	8	202	335	59.3	79.2	0	0
··· EL1 Core Zn (G.C48)	Office (Open Plan) (33%)	U	26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S49)	Office (Open Plan) (44%)	S	432	660	1.51	100%	54	8%	0.124	22.4	2	223	335	53.9	76.2	10	0
··· EL1 South Perim Zn (G.S50)	Office (Open Plan) (33%)	U	433	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 WSW Perim Zn (G.WSW51)	Office (Open Plan) (33%)	U	430	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Pl Zn (G.52)	(unknown)	U	25,572	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	20,610	··	··	··	··	··	··	62	··	··	··	··	1%	0%
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Design Ventilation Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Heat Hrs
EL2 Sys2 (PMZS) (G)	Pkgd Var Vol Var Temp	D	5,149	13,954	2.71	95%	643	5%	0.125	5.3	36	143	388	83.8	145.6	128	0
··· EL2 NNE Perim Zn (G.NNE1)	Office (Open Plan) (38%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E2)	Office (Open Plan) (38%)	U	169	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 NNW Perim Zn (G.NNW3)	Office (Open Plan) (38%)	U	513	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 SW Perim Zn (G.SW4)	Office (Open Plan) (38%)	U	27	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 WSW Perim Zn (G.WSW5)	Office (Open Plan) (38%)	U	261	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C6)	Office (Open Plan) (38%)	U	287	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E7)	Office (Open Plan) (38%)	U	73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 SSE Perim Zn (G.SSE8)	Office (Open Plan) (38%)	U	400	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E9)	Office (Open Plan) (38%)	U	11,077	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C10)	Office (Open Plan) (38%)	U	11	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N11)	Office (Open Plan) (38%)	U	251	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 NNW Perim Zn (G.NNW12)	Office (Open Plan) (38%)	U	489	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N13)	Office (Open Plan) (38%)	U	138	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C14)	Office (Open Plan) (38%)	U	190	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 NNE Perim Zn (G.NNE15)	Office (Open Plan) (47%)	C	871	850	0.98	13%	109	13%	0.125	21.5	2	398	388	30.2	98.8	22	0
··· EL2 Core Zn (G.C16)	Office (Open Plan) (38%)	U	20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N17)	Office (Open Plan) (47%)	S	306	1,350	4.40	100%	38	3%	0.125	21.5	3	88	388	136.2	191.4	0	0
··· EL2 Core Zn (G.C18)	Office (Open Plan) (47%)	S	79	850	10.81	100%	10	1%	0.125	21.5	2	36	388	334.4	364.5	0	0
··· EL2 Core Zn (G.C19)	Office (Open Plan) (38%)	U	99	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C20)	Office (Open Plan) (38%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N21)	Office (Open Plan) (47%)	S	453	910	2.01	100%	57	6%	0.125	21.5	2	193	388	62.1	120.7	0	0
··· EL2 NNW Perim Zn (G.NNW22)	Office (Open Plan) (47%)	S	561	750	1.34	100%	70	9%	0.125	21.5	2	291	388	41.3	108.5	4	0
··· EL2 West Perim Zn (G.W23)	Office (Open Plan) (47%)	S	89	250	2.80	100%	11	4%	0.125	21.5	1	138	388	86.7	148.2	0	0
··· EL2 Core Zn (G.C24)	Office (Open Plan) (47%)	S	81	341	4.19	100%	10	3%	0.125	21.5	1	93	388	129.6	185.7	0	0
··· EL2 Core Zn (G.C25)	Office (Open Plan) (38%)	U	195	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C26)	Office (Open Plan) (38%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C27)	Office (Open Plan) (38%)	U	2,446	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C28)	Office (Open Plan) (38%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C29)	Office (Open Plan) (38%)	U	96	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 West Perim Zn (G.W30)	Office (Open Plan) (47%)	S	87	675	7.77	100%	11	2%	0.125	21.5	2	50	388	240.1	282.1	0	0
··· EL2 SW Perim Zn (G.SW31)	Office (Open Plan) (47%)	S	298	553	1.86	100%	37	7%	0.125	21.5	1	209	388	57.4	122.6	33	0
··· EL2 South Perim Zn (G.S32)	Office (Open Plan) (38%)	U	426	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C33)	Office (Open Plan) (38%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C34)	Office (Open Plan) (38%)	U	97	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C35)	Office (Open Plan) (38%)	U	102	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S36)	Office (Open Plan) (47%)	S	397	2,150	5.41	100%	50	2%	0.125	21.5	6	72	388	167.2	218.5	0	0
··· EL2 South Perim Zn (G.S37)	Office (Open Plan) (47%)	S	323	850	2.63	100%	40	5%	0.125	21.5	2	148	388	81.3	143.5	16	0
··· EL2 South Perim Zn (G.S38)	Office (Open Plan) (47%)	S	383	1,850	4.83	100%	48	3%	0.125	21.5	5	80	388	149.4	202.9	3	0
··· EL2 Core Zn (G.C39)	Office (Open Plan) (38%)	U	58	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C40)	Office (Open Plan) (38%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S41)	Office (Open Plan) (47%)	S	439	1,250	2.85	100%	55	4%	0.125	21.5	3	136	388	88.1	149.4	0	0
··· EL2 Core Zn (G.C42)	Office (Open Plan) (38%)	U	104	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C43)	Office (Open Plan) (38%)	U	73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 SSW Perim Zn (G.SSW44)	Office (Open Plan) (47%)	S	412	650	1.58	100%	51	8%	0.125	21.5	2	246	388	48.7	115.0	19	0
··· EL2 South Perim Zn (G.S45)	Office (Open Plan) (47%)	S	368	675	1.83	100%	46	7%	0.125	21.5	2	212	388	56.7	121.9	31	0
··· EL2 South Perim Zn (G.S46)	Office (Open Plan) (38%)	U	44	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 ESE Perim Zn (G.ESE47)	Office (Open Plan) (38%)	U	380	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Pl Zn (G.48)	(unknown)	U	23,431	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	--	--	--	13,954	--	--	--	--	--	--	36	--	--	--	--	1%	0%
Sum of Zones / System Total	--	--	--	100%	--	--	--	--	--	--	100%	--	--	--	--	--	--

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System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Design Ventilation Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Hrs Outside Thrl-Range Cool Btuh/sf	Heat Btuh/sf	Cool Hrs	Heat Hrs
EL3 Sys3 (PMZS) (G)	Pkgd Var Vol Var Temp	D	11,467	8,857	0.77	99%	1,352	15%	0.118	11.2	30	388	300	30.9	44.4	90	0
··· EL3 NNE Perim Zn (G.NNE1)	Office (Open Plan) (32%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 East Perim Zn (G.E2)	Office (Open Plan) (32%)	U	171	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 NNW Perim Zn (G.NNW3)	Office (Open Plan) (32%)	U	514	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N4)	Office (Open Plan) (49%)	C	308	154	0.50	24%	36	24%	0.118	19.5	1	599	300	20.0	37.1	0	0
··· EL3 Core Zn (G.C5)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C6)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N7)	Office (Open Plan) (49%)	S	1,992	997	0.50	100%	235	24%	0.118	19.5	3	599	300	20.0	37.1	0	0
··· EL3 Core Zn (G.C8)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C9)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C10)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C11)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C12)	Office (Open Plan) (32%)	U	140	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C13)	Office (Open Plan) (32%)	U	30	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N14)	Office (Open Plan) (49%)	S	367	203	0.55	100%	43	21%	0.118	19.5	1	542	300	22.1	38.5	0	0
··· EL3 Core Zn (G.C15)	Office (Open Plan) (32%)	U	10	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C16)	Office (Open Plan) (32%)	U	12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N17)	Office (Open Plan) (32%)	U	249	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 NNW Perim Zn (G.NNW18)	Office (Open Plan) (32%)	U	489	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N19)	Office (Open Plan) (32%)	U	138	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C20)	Office (Open Plan) (32%)	U	190	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 NE Perim Zn (G.NE21)	Office (Open Plan) (49%)	S	441	221	0.50	100%	52	24%	0.118	19.5	1	598	300	20.1	37.1	0	0
··· EL3 Core Zn (G.C22)	Office (Open Plan) (32%)	U	94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C23)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N24)	Office (Open Plan) (49%)	S	361	181	0.50	100%	43	24%	0.118	19.5	1	596	300	20.1	37.1	0	0
··· EL3 North Perim Zn (G.N25)	Office (Open Plan) (49%)	S	434	217	0.50	100%	51	24%	0.118	19.5	1	600	300	20.0	37.0	0	0
··· EL3 Core Zn (G.C26)	Office (Open Plan) (32%)	U	94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C27)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 North Perim Zn (G.N28)	Office (Open Plan) (49%)	S	359	180	0.50	100%	42	24%	0.118	19.5	1	598	300	20.1	37.1	0	0
··· EL3 North Perim Zn (G.N29)	Office (Open Plan) (49%)	S	436	218	0.50	100%	51	24%	0.118	19.5	1	599	300	20.0	37.1	0	0
··· EL3 WNW Perim Zn (G.WNW30)	Office (Open Plan) (49%)	S	360	274	0.76	100%	42	15%	0.118	19.5	1	394	300	30.5	44.1	0	0
··· EL3 Core Zn (G.C31)	Office (Open Plan) (32%)	U	94	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C32)	Office (Open Plan) (32%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C33)	Office (Open Plan) (32%)	U	2,174	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C34)	Office (Open Plan) (32%)	U	26	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C35)	Office (Open Plan) (32%)	U	92	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 WSW Perim Zn (G.WSW36)	Office (Open Plan) (49%)	S	357	545	1.53	100%	42	8%	0.118	19.5	2	196	300	61.1	84.8	41	0
··· EL3 South Perim Zn (G.S37)	Office (Open Plan) (32%)	U	425	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C38)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C39)	Office (Open Plan) (32%)	U	193	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S40)	Office (Open Plan) (49%)	S	705	750	1.06	100%	83	11%	0.118	19.5	3	282	300	42.6	52.3	0	0
··· EL3 Core Zn (G.C41)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S42)	Office (Open Plan) (49%)	S	433	433	1.00	100%	51	12%	0.118	19.5	1	300	300	40.0	50.5	11	0
··· EL3 Core Zn (G.C43)	Office (Open Plan) (32%)	U	100	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S44)	Office (Open Plan) (49%)	S	356	600	1.68	100%	42	7%	0.118	19.5	2	178	300	67.4	89.0	0	0
··· EL3 Core Zn (G.C45)	Office (Open Plan) (32%)	U	81	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C46)	Office (Open Plan) (32%)	U	80	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S47)	Office (Open Plan) (32%)	U	354	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S48)	Office (Open Plan) (49%)	S	459	630	1.37	100%	54	9%	0.118	19.5	2	218	300	55.0	80.6	0	0
··· EL3 SE Perim Zn (G.SE49)	Office (Open Plan) (32%)	U	396	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 SW Perim Zn (G.SW50)	Office (Open Plan) (32%)	U	44	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S51)	Office (Open Plan) (49%)	S	316	450	1.43	100%	37	8%	0.118	19.5	2	210	300	57.1	82.1	0	0
··· EL3 South Perim Zn (G.S52)	Office (Open Plan) (49%)	S	1,984	1,500	0.76	100%	234	16%	0.118	19.5	5	396	300	30.3	44.0	27	0
··· EL3 Core Zn (G.C53)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C54)	Office (Open Plan) (32%)	U	141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C55)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C56)	Office (Open Plan) (32%)	U	141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C57)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C58)	Office (Open Plan) (32%)	U	141	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 WSW Perim Zn (G.WSW59)	Office (Open Plan) (32%)	U	2,347	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C60)	Office (Open Plan) (32%)	U	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C61)	Office (Open Plan) (32%)	U	126	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C62)	Office (Open Plan) (32%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C63)	Office (Open Plan) (32%)	U	68	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C64)	Office (Open Plan) (32%)	U	387	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C65)	Office (Open Plan) (32%)	U	33	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

··· EL3 WSW Perim Zn (G.WSW66)	Office (Open Plan) (32%)	U	349	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 East Perim Zn (G.E67)	Office (Open Plan) (49%)	S	364	302	0.83	100%	43	14%	0.118	19.5	1	361	300	33.2	46.0	0	0
··· EL3 East Perim Zn (G.E68)	Office (Open Plan) (49%)	S	1,433	1,002	0.70	100%	169	17%	0.118	19.5	3	429	300	28.0	42.4	11	0
··· EL3 Core Zn (G.C69)	Office (Open Plan) (32%)	U	23	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C70)	Office (Open Plan) (32%)	U	126	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C71)	Office (Open Plan) (32%)	U	61	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C72)	Office (Open Plan) (32%)	U	24	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Core Zn (G.C73)	Office (Open Plan) (32%)	U	291	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 East Perim Zn (G.E74)	Office (Open Plan) (32%)	U	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 South Perim Zn (G.S75)	Office (Open Plan) (32%)	U	385	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL3 Pl Zn (G.76)	(unknown)	U	23,282	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	8,857	··	··	··	··	··	··	30	··	··	··	··	1%	0%
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

		Type*		Design Flow			Design Ventilation			Design Capacity						Hrs Outside Thrl-Range	
System & Zone Name	System Type Principal Zone Activity	Ret Zn	Area sqft	Supply cfm	Supply cfm/sf	Min Flow	OSA cfm	OSA %	OSA cfm/sf	OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Cool Hrs	Heat Hrs
EL4 Sys4 (PMZS) (G)	Pkgd Var Vol Var Temp	D	11,554	16,282	1.41	97%	1,361	8%	0.118	11.3	47	248	349	48.4	77.6	26	0
··· EL4 NNE Perim Zn (G.NNE1)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E2)	Office (Open Plan) (33%)	U	171	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNW Perim Zn (G.NNW3)	Office (Open Plan) (33%)	U	514	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NW Perim Zn (G.NW4)	Office (Open Plan) (48%)	U	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 WSW Perim Zn (G.WSW5)	Office (Open Plan) (33%)	U	1,513	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E6)	Office (Open Plan) (48%)	C	360	450	1.25	9%	42	9%	0.118	19.6	1	279	349	42.9	73.3	12	0
··· EL4 East Perim Zn (G.E7)	Office (Open Plan) (48%)	S	686	1,550	2.26	100%	81	5%	0.118	19.6	4	166	349	77.6	100.5	0	0
··· EL4 Core Zn (G.C8)	Office (Open Plan) (33%)	U	21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E9)	Office (Open Plan) (48%)	S	287	500	1.74	100%	34	7%	0.118	19.6	1	201	349	59.8	86.5	0	0
··· EL4 East Perim Zn (G.E10)	Office (Open Plan) (48%)	S	311	510	1.64	100%	37	7%	0.118	19.6	1	213	349	56.4	83.9	0	0
··· EL4 East Perim Zn (G.E11)	Office (Open Plan) (48%)	S	311	850	2.74	100%	37	4%	0.118	19.6	2	128	349	94.0	113.4	0	0
··· EL4 Core Zn (G.C12)	Office (Open Plan) (33%)	U	21	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C13)	Office (Open Plan) (33%)	U	278	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 East Perim Zn (G.E14)	Office (Open Plan) (33%)	U	73	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C15)	Office (Open Plan) (33%)	U	22	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S16)	Office (Open Plan) (33%)	U	406	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C17)	Office (Open Plan) (33%)	U	32	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 WSW Perim Zn (G.WSW18)	Office (Open Plan) (33%)	U	347	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S19)	Office (Open Plan) (48%)	S	1,676	2,100	1.25	100%	197	9%	0.118	19.6	8	279	349	43.0	73.4	0	0
··· EL4 North Perim Zn (G.N20)	Office (Open Plan) (33%)	U	689	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N21)	Office (Open Plan) (48%)	S	638	1,719	2.70	100%	75	4%	0.118	19.6	5	130	349	92.6	112.3	0	0
··· EL4 Core Zn (G.C22)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C23)	Office (Open Plan) (33%)	U	139	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C24)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C25)	Office (Open Plan) (33%)	U	139	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N26)	Office (Open Plan) (48%)	S	1,165	1,569	1.32	100%	140	9%	0.118	19.6	4	284	349	45.5	75.3	0	0
··· EL4 North Perim Zn (G.N27)	Office (Open Plan) (48%)	S	287	380	1.35	100%	34	9%	0.118	19.6	1	259	349	40.3	75.9	0	0
··· EL4 Core Zn (G.C28)	Office (Open Plan) (33%)	U	79	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C29)	Office (Open Plan) (33%)	U	15	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C30)	Office (Open Plan) (33%)	U	1,372	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C31)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C32)	Office (Open Plan) (33%)	U	75	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C33)	Office (Open Plan) (33%)	U	66	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C34)	Office (Open Plan) (33%)	U	29	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S35)	Office (Open Plan) (48%)	S	552	876	1.59	100%	65	7%	0.118	19.6	3	220	349	54.5	82.4	0	0
··· EL4 South Perim Zn (G.S36)	Office (Open Plan) (48%)	S	683	807	1.18	100%	80	10%	0.118	19.6	2	296	349	40.6	71.5	3	0
··· EL4 Core Zn (G.C37)	Office (Open Plan) (33%)	U	12	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N38)	Office (Open Plan) (33%)	U	249	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNW Perim Zn (G.NNW39)	Office (Open Plan) (33%)	U	469	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 North Perim Zn (G.N40)	Office (Open Plan) (33%)	U	132	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C41)	Office (Open Plan) (33%)	U	181	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNE Perim Zn (G.NNE42)	Office (Open Plan) (48%)	S	910	521	0.57	100%	107	21%	0.118	19.6	1	611	349	19.7	55.0	0	0
··· EL4 Core Zn (G.C43)	Office (Open Plan) (33%)	U	20	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 NNW Perim Zn (G.NNW44)	Office (Open Plan) (48%)	S	1,265	951	0.75	100%	149	16%	0.118	19.6	3	466	349	25.8	59.8	0	0
··· EL4 Core Zn (G.C45)	Office (Open Plan) (33%)	U	199	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

··· EL4 Core Zn (G.C46)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C47)	Office (Open Plan) (48%)	S	155	377	2.44	100%	18	5%	0.118	19.6	1	143	349	83.7	105.3	0	0
··· EL4 Core Zn (G.C48)	Office (Open Plan) (33%)	U	199	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C49)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C50)	Office (Open Plan) (33%)	U	2,079	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 ESE Perim Zn (G.ESE51)	Office (Open Plan) (33%)	U	391	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 SW Perim Zn (G.SW52)	Office (Open Plan) (33%)	U	44	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S53)	Office (Open Plan) (48%)	S	459	640	1.40	100%	54	8%	0.118	19.6	2	250	349	47.9	77.2	11	0
··· EL4 South Perim Zn (G.S54)	Office (Open Plan) (33%)	U	354	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C55)	Office (Open Plan) (33%)	U	80	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C56)	Office (Open Plan) (33%)	U	103	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S57)	Office (Open Plan) (48%)	S	1,411	1,820	1.29	100%	166	9%	0.118	19.6	5	271	349	44.3	74.4	0	0
··· EL4 Core Zn (G.C58)	Office (Open Plan) (33%)	U	193	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C59)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C60)	Office (Open Plan) (33%)	U	193	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C61)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 South Perim Zn (G.S62)	Office (Open Plan) (33%)	U	411	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C63)	Office (Open Plan) (33%)	U	25	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 Core Zn (G.C64)	Office (Open Plan) (33%)	U	102	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL4 WSW Perim Zn (G.WSW65)	Office (Open Plan) (48%)	S	378	656	1.73	100%	45	7%	0.118	19.6	2	202	349	59.5	86.3	0	0
··· EL4 Pl Zn (G.66)	(unknown)	U	23,329	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	16,282	··	··	··	··	··	··	47	··	··	··	··	0%	0%
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Project Totals

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow: Supply cfm	Supply cfm/sf	Min Flow	Design Ventilation: OSA cfm	OSA %	OSA cfm/sf	Design Capacity: OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Throttling Range: Heat Btuh/sf	Hrs Outside Thrl-Range
Sum of SYSTEMs	··	··	45,341	59,703	1.32	89%	5,493	10%	0.121	11.0	174	261	344	46.0	72.9	2%
Sum of ZONEs	··	··	··	59,703	1.32	··	··	··	··	··	174	··	··	··	··	··
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Block 2

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow: Supply cfm	Supply cfm/sf	Min Flow	Design Ventilation: OSA cfm	OSA %	OSA cfm/sf	Design Capacity: OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range: Cool Hrs	Heat Hrs
EL1 Sys1 (PMZS) (G)	Pkgd Var Vol Var Temp	d	13,286	22,147	1.67	56%	1,601	7%	0.121	18.2	52	254	424	47.2	91.1	300	0
··· EL1 East Perim Zn (G.E1)	Office (Executive/Private) (72%)	U	588	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E2)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C3)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 West Perim Zn (G.W4)	Office (Executive/Private) (72%)	C	6,256	10,427	1.67	7%	754	7%	0.121	22.8	25	254	424	47.2	91.1	151	0
··· EL1 East Perim Zn (G.E5)	Office (Executive/Private) (72%)	U	452	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 North Perim Zn (G.N6)	Office (Executive/Private) (72%)	U	296	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S7)	Office (Executive/Private) (72%)	U	162	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 South Perim Zn (G.S8)	Office (Executive/Private) (72%)	U	123	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E9)	Office (Executive/Private) (72%)	S	7,030	11,720	1.67	100%	847	7%	0.121	22.8	28	254	424	47.2	91.1	149	0
··· EL1 Core Zn (G.C10)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 East Perim Zn (G.E11)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 West Perim Zn (G.W12)	Office (Executive/Private) (72%)	U	588	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Pl Zn (G.13)	(unknown)	U	16,990	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	22,147	··	··	··	··	··	··	52	··	··	··	··	12%	0%
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Design Ventilation Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Heat Hrs
EL2 Sys2 (PMZS) (G)	Pkgd Var Vol Var Temp	d	13,290	20,603	1.55	57%	1,601	8%	0.120	18.2	49	270	419	44.4	85.0	185	6
··· EL2 East Perim Zn (G.E1)	Office (Executive/Private) (72%)	U	588	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E2)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Core Zn (G.C3)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 West Perim Zn (G.W4)	Office (Executive/Private) (72%)	C	6,256	9,655	1.54	8%	754	8%	0.120	22.8	23	271	419	44.2	84.8	93	3
··· EL2 East Perim Zn (G.E5)	Office (Executive/Private) (72%)	U	452	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 North Perim Zn (G.N6)	Office (Executive/Private) (72%)	U	286	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S7)	Office (Executive/Private) (72%)	U	169	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 South Perim Zn (G.S8)	Office (Executive/Private) (72%)	U	129	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E9)	Office (Executive/Private) (72%)	S	7,034	10,948	1.56	100%	848	8%	0.120	22.8	26	269	419	44.0	80.2	92	3
··· EL2 Core Zn (G.C10)	Corridor	U	201	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 East Perim Zn (G.E11)	Office (Executive/Private) (72%)	U	545	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 West Perim Zn (G.W12)	Office (Executive/Private) (72%)	U	586	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL2 Pl Zn (G.13)	(unknown)	U	16,992	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	--	--	--	20,603	--	--	--	--	--	--	49	--	--	--	--	7%	0%
Sum of Zones / System Total	--	--	--	100%	--	--	--	--	--	--	100%	--	--	--	--	--	--

* Return Types: -- 'P' = Plenum Return -- 'D' = Ducted Return -- 'd' = Direct return -- (Plenum Zones are not shown on this report)
* Zone Types: -- 'C' = Conditioned Zone -- 'U' = Unconditioned Zone -- 'S' = Slave Zone -- (conditioned but no t-stat)

Project Totals

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Design Ventilation Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Throttling Range Hrs Outside Thrl-Range
Sum of SYSTEMs	--	--	26,577	42,750	1.61	57%	3,202	8%	0.120	18.2	101	262	421	45.8	88.1	7%
Sum of ZONEs	--	--	--	42,750	1.61	--	--	--	--	--	101	--	--	--	--	--
Sum of Zones / System Total	--	--	--	100%	--	--	--	--	--	--	100%	--	--	--	--	--

* Return Types: -- 'P' = Plenum Return -- 'D' = Ducted Return -- 'd' = Direct return -- (Plenum Zones are not shown on this report)
* Zone Types: -- 'C' = Conditioned Zone -- 'U' = Unconditioned Zone -- 'S' = Slave Zone -- (conditioned but no t-stat)

Block 3

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Design Ventilation Min Flow	OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Heat Hrs
EL1 Sys1 (PMZS) (G)	Pkgd Var Vol Var Temp	d	5,642	5,609	0.99	13%	712	13%	0.126	19.5	19	304	302	39.5	56.3	0	0
··· EL1 Core Zn (G.C1)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C2)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C3)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C4)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C5)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C6)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C7)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 Core Zn (G.C8)	Corridor (58%)	U	152	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 West Perim Zn (G.W9)	Office (Executive/Private) (85%)	U	176	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
··· EL1 NE Perim Zn (G.NE10)	Office (Executive/Private) (85%)	C	5,642	5,609	0.99	13%	712	13%	0.126	21.3	19	304	302	39.5	56.3	0	0
··· EL1 Pl Zn (G.11)	(unknown)	U	7,034	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	--	--	--	5,609	--	--	--	--	--	--	19	--	--	--	--	0%	0%
Sum of Zones / System Total	--	--	--	100%	--	--	--	--	--	--	100%	--	--	--	--	--	--

* Return Types: -- 'P' = Plenum Return -- 'D' = Ducted Return -- 'd' = Direct return -- (Plenum Zones are not shown on this report)
* Zone Types: -- 'C' = Conditioned Zone -- 'U' = Unconditioned Zone -- 'S' = Slave Zone -- (conditioned but no t-stat)

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Min Flow	Design Ventilation OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Hrs Outside Thrl-Range Cool Hrs	Heat Hrs
EL2 Sys2 (PMZS) (G)	Pkgd Var Vol Var Temp	d	8,560	8,205	0.96	12%	1,017	12%	0.119	22.9	27	318	305	37.7	54.1	45	0
··· EL2 East Perim Zn (G.E1)	Office (Executive/Private) (70%)	C	8,560	8,205	0.96	12%	1,017	12%	0.119	22.9	27	318	305	37.7	54.1	45	0
··· EL2 PI Zn (G.2)	(unknown)	U	8,560	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Sum of Zones	··	··	··	8,205	··	··	··	··	··	··	27	··	··	··	··	1%	0%
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Project Totals

System & Zone Name	System Type Principal Zone Activity	Type* Ret Zn	Area sqft	Design Flow Supply cfm	Supply cfm/sf	Min Flow	Design Ventilation OSA cfm	OSA %	OSA cfm/sf	Design Capacity OSA cfm/per	Cool tons	Cool sf/ton	Cool cfm/ton	Cool Btuh/sf	Heat Btuh/sf	Throttling Range Hrs Outside Thrl-Range
Sum of SYSTEMs	··	··	14,202	13,814	0.97	13%	1,729	13%	0.122	21.4	45	312	304	38.4	55.0	1%
Sum of ZONEs	··	··	··	13,814	0.97	··	··	··	··	··	45	··	··	··	··	··
Sum of Zones / System Total	··	··	··	100%	··	··	··	··	··	··	100%	··	··	··	··	··

* Return Types: ·· 'P' = Plenum Return ·· 'D' = Ducted Return ·· 'd' = Direct return ·· (Plenum Zones are not shown on this report)
* Zone Types: ·· 'C' = Conditioned Zone ·· 'U' = Unconditioned Zone ·· 'S' = Slave Zone ·· (conditioned but no t-stat)

Annexure 2: Solar PV generation calculation sheet from snapshot

PVWatts® Calculator

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RESULTS

Print Results

7,252 kWh/Year*

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)	Value ($)
January	4.35	509	N/A
February	5.31	545	N/A
March	6.42	691	N/A
April	6.82	697	N/A
May	6.52	671	N/A
June	5.71	584	N/A
July	5.46	592	N/A
August	5.91	651	N/A
September	6.17	661	N/A
October	5.67	620	N/A
November	4.80	522	N/A
December	4.43	509	N/A
Annual	5.63	7,252	0

Annexure 3: Cut Sheets

6.1 Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in:

6.1.1 Cement mortar 1:4 (1 cement : 4 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹	
	Details of cost for 1 cum					
	MATERIAL					
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	0.494	4500.00	2223.00	
2201	Carriage of Bricks	1000 Nos	0.494	276.72	136.70	
	Cement mortar 1 : 4 (1 cement : 4 coarse sand)					
3.9	Rate as per item No 3.9 of SH: Mortar	cum	0.25	4010.35	1002.59	
9999	Sundries	L.S.	2.73	2.00	5.46	
	LABOUR					
0123	Mason (brick layer) 1st class	day	0.36	738.00	265.68	
0124	Mason (brick layer) 2nd class	day	0.36	679.00	244.44	
0115	Coolie	day	1.37	558.00	764.46	
0101	Bhisti	day	0.20	617.00	123.40	
	TOTAL				4765.73	W
	Add 1 % Water charges on "W"				47.66	
	TOTAL				4813.38	X
	Add GST on "X" (multiplying factor 0.1405)				676.28	
	TOTAL				5489.66	Y
	Add 15% CPOH on "Y"				823.45	
	TOTAL				6313.11	Z
	Add Cess @ 1% on "Z"				63.13	
	Cost of 1 Cum.				6376.25	
	Say				6376.25	

6.1.2 Cement mortar 1:6 (1 cement : 6 coarse sand)

Code	Description	Unit	Quantity	Rate ₹	Amount ₹
	Details of cost for 1 cum				
	MATERIAL				
2602	Common burnt clay F.P.S. (non modular) bricks class designation 7.5	1000 Nos	0.494	4500.00	2223.00
2201	Carriage of Bricks	1000 Nos	0.494	276.72	136.70
	Cement mortar 1 : 6 (1 cement : 6 coarse sand) (Rate as per item No 3.11)				
3.11	Rate as per Item No.3.11 of SH: Mortar	cum	0.25	3356.15	839.04
9999	Sundries	L.S.	2.73	2.00	5.46
	LABOUR				
0123	Mason (brick layer) 1st class	day	0.36	738.00	265.68
0124	Mason (brick layer) 2nd class	day	0.36	679.00	244.44
0115	Coolie	day	1.37	558.00	764.46

6.47 Providing and laying autoclaved aerated cement blocks masonry with 150mm/ 230mm/300 mm thick AAC blocks in super structure above plinth level up to floor V level with RCC band at sill level and lintel level with approved block laying polymer modified adhesive mortar all complete as per direction of Engineer-in-Charge. (The payment of RCC band and reinforcement shall be made for seperately).

Code	Description	Unit	Quantity	Rate ₹	Amount ₹	
	Details of cost for 1 cum.					
	MATERIAL					
8655	Autoclaved areated cement (AAC) blocks	cum	1.00	2600.00	2600.00	
0357	Polymer modified adhesive mortar	Kg	30.00	15.00	450.00	
9999	Sundries	L.S.	2.73	2.00	5.46	
	LABOUR					
0123	Mason (brick layer) 1 st class	day	0.36	738.00	265.68	
0124	Mason (brick layer) 2nd class	day	0.36	679.00	244.44	
0115	Coolie	day	1.37	558.00	764.46	
	Extra labour element required for lifting of materials (above floor two level upto floor five level) (0.75x 1.50 = 1.13)					
0115	Coolie	day	1.13	558.00	630.54	
	TOTAL				4960.58	W
	Add 1 % Water charges on "W"				49.61	
	TOTAL				5010.19	X
	Add GST on "X" (multiplying factor 0.1405)				703.93	
	TOTAL				5714.12	Y
	Add 15% CPOH on "Y"				857.12	
	TOTAL				6571.23	Z
	Add Cess @ 1% on "Z"				65.71	
	Cost of 1 cum				6636.95	
	Say				6636.95	

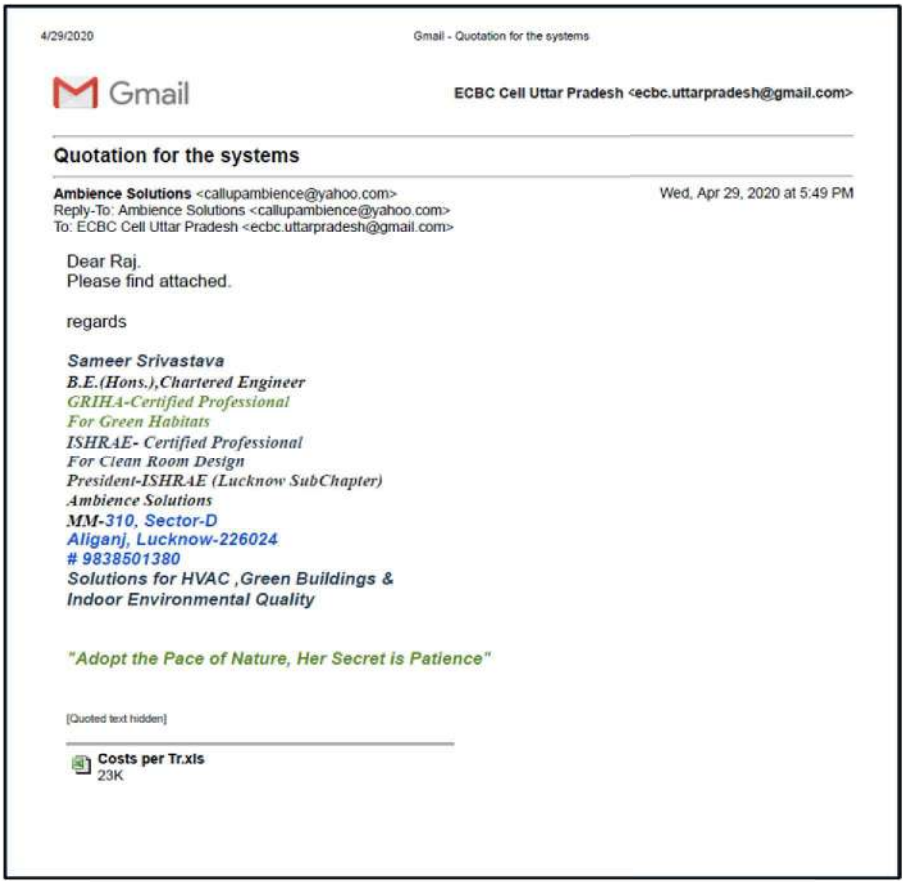
Code No.	Description	Unit	Rate ₹
8308	PPR Union 32 mm	each	137.20
8309	PPR Union 40 mm	each	184.80
8310	PPR Union 50 mm	each	352.80
8311	PPR Union 63 mm	each	483.60
8312	PPR Union 75 mm	each	933.00
8500	Water for jetting / blowback	1000 litre	1500.00
8501	Polymer modified cementation coating	kg	140.00
8502	Fibre glass cloth	sqm	25.00
8504	Multi surface paint	litre	255.00
8505	Acrylic exterior paint	litre	170.00
8506	Premium Acrylic exterior paint	litre	180.00
8507	Textured exterior paint	litre	240.00
8508	Primer for cement paint	litre	79.00
8509	Special Primer (C.W.)	litre	140.00
8510	Metal Primer (U.G.)	litre	90.00
8511	Fibre reinforced elastomeric liquid water proofing membrane	litre	198.69
8512	Cementitious water proofing coating with elastic polymers	kg	189.13
8513	Acrylic modified resin based texture	kg	36.00
8514	40 mm long S.S screws with plastic rawl plugs	100	40.00
8515	Galavanised MS 8 mm outer diameter M-6 dash fastener 50mm long	each	31.00
8516	ZMB 60/equivalent	kg	105.00
8517	ZMB thinner	litre	205.00
8518	Zycoprime / equivalent	litre	210.00
8519	Zycosil / equivalent	litre	1800.00
8520	Elastobar / equivalent	kg	300.00
8552	Mineral fibre beveled tegular edged ceiling tiles 595 x595mm,16 mm thick	sqm	830.00
8553	Mineral fibre beveled tegular edged ceiling tiles 595 x595mm,16 mm thick with bio-block conforming to ISO 5 (class 100) specifications.	sqm	920.00
8554	Mineral fiber beveled tegular edged ceiling tiles 595 x595mm,20 mm thick.	sqm	1040.00
8555	G.I main runner 15 x32 mm of 3000 mm length, 0.33 mm thick	each	185.00
8556	G.I cross-T 15 x32 mm of 1200 mm length, 0.33 mm thick	each	78.00
8557	G.I cross-T 15 x32 mm of 600 mm length, 0.33 mm thick	each	35.00
8558	G.I hanger rod 6mm dia fully threaded upto 1000 mm length	each	26.00
8559	Stainless steel U Channel of size (50x25x2mm)	metre	160.00
8560	Non staining water resistant clear silicon	metre	65.00
8561	Extruded polystyrene rigid insulation board 50 mm thick	sqm	525.00
8562	Expanded Polystyrene insulation board 120 mm thick confirming to IS 4671-1984, Fire retardant property self-extinguishing type as per EN 13501-1	sqm	800.00
8563	15 mm thick, light weight, integral densified micro look edged,false ceiling tiles of size 595x595 mm.	sqm	720.00
8564	15 mm thick, light weight,fully perforated square/butt edge integral densified,false ceiling tiles of size 595x595 mm.	sqm	900.00
8565	Galavanised MS hanger rod 6 mm dia MS fully threaded up to 1000mm length	each	26.00
8566	Powder coated steel section main-T ceiling sections 15x42x0.40 mm (3000 mm long)	each	235.00
8567	Galvanized mild steel perimeter wall angle 22x19x0.40 mm (3000mm long)	each	115.00

Schedule Item No	Common Specification	Unit	Complete Rate	Labour Rate
1416	Supply and fixing of Recess/pendent mounting Laving having 1' X 4' Size 36 to 46 Watt seamlessly intergrateds LED luminaire with acrylic sheet diffuser and intergral electronic driver, .Compelete in all respect.			
	CAT-AAA 3960-5060 system lumens, 110lm/W, PF>0.95, THD <10% at full, CR>80, with 5 years warrantee	Each	6200	122
	CAT-AA 3600-4600 system lumens, 100lm/W, PF>0.95, THD <10% at full, CR>80, with 3 year warrantee.	Each	4290	122
	CAT-A 3220-4140 system lumens, 90lm/W, PF>0.95, THD <20% at full, CR>80, with 2 year warrantee	Each	2200	122
1417	Supply & fixing of water tight oblong 10 watt LED Bulkhead luminaire having die cast housing with driver set confirming to IP65 and above protection, .Compelete in all respect.			
	CAT-AAA 1100 system lumens, 110lm/W, PF>0.95, with 5 years warrantee	Each	1400	122
	CAT-AA 1000 system lumens, 100lm/W, PF>0.95, with 3 year warrantee.	Each	1250	122
	CAT-A 900 system lumens, 90lm/W, PF>0.95, with 2 year warrantee	Each	-	-
1417(A)	Supply and fixing of Single LED light wall bracket 3 to 6 Watt on matching M.D.F.E.G Board base etc. complete in all respect.			
	CAT-AAA 330-660 system lumens, 110lm/W, PF>0.95, with years warrantee	Each	2600	82
	CAT-AA 300-600 system lumens, 100lm/W, PF>0.95, with year warrantee.	Each	-	-
	CAT-A 270-540 system lumens, 90lm/W, PF>0.95, with 2 year warrantee	Each	-	-
1418	Supply and fixing of Surface/Pendent mounting 20 Watt LED Surface Mounting weather proof Luminaire with PC Housing and opal finish cover confirming to IP65 Compelete in all respect.			
	CAT-AAA 2200 system lumens, 110lm/W, PF>0.95, with 5 years warrantee	Each	2030	122
	CAT-AA 2000 system lumens, 100lm/W, PF>0.95, with 3 year warrantee.	Each	-	-
	CAT-A 1800 system lumens, 90lm/W, PF>0.95, with 2 year warrantee	Each	-	-
1418(A)	Supply and fixing of Surface/Pendent mounting 40 Watt LED Surface Mounting weather proof Luminaire with PC Housing and opal finish cover confirming to IP65 .Compelete in all respect.			
	CAT-AAA 4400 system lumens, 110lm/W, PF>0.95, with 5 years warrantee	Each	2290	122
	CAT-AA 4000system lumens, 100lm/W, PF>0.95, with 3 year warrantee.	Each	-	-
	CAT-A 3600 system lumens, 90lm/W, PF>0.95, with 2 year warrantee	Each	-	-

(राजा राम)
अधीक्षण अभियन्ता
17वाँ (वि0/याँ0)
लो0नि0वि0, अ0

(अभय शंकर श्रीवास्तव)
मुख्य अभियन्ता (वि0/याँ0)
लो0नि0वि0, अ0

		BILL OF QUANTITIES - NON HARYANA PWD SCHEDULES ITEMS				
S. No	Non HSR / CPWD DSR 2014 item	Description of item	Unit	Quantity	Rate	Amount
1		2	3	4	5	6.00
43	NS-AR06	Providing and laying one layer of Extruded polystyrene insulation board 100mm thickness of 32 to 35 kg cubic meter density (Foamular) , with shiplap joint at all levels, as shown in drawing. (A)	sqm	1,864.40	1,634.15	3,046,709.26
44	NS-AR07	Providing and fixing antistatic carpet roll 22 OZ weight per sqm as per approved sample laid with adhesive and protected with polythene till handover. (price Rs. 100 per sqft plus tax)	sqm	292.69	1,451.00	424,693.19
45	NS-AR08	Providing and fixing one layer of Extruded polystyrene insulation board 75mm thickness of 32 to 35 kg cubic meter density (Foamular) , with shiplap joint in partitions at all levels, fixed to existing framing as shown in drawing. (AR)	sqm	850.00	1,253.00	1,065,050.00
46	NS-AR09	Extra (DGU having) for 6mm thick solar glass on external side with properties having SHGC 0.32, and VLT having 59% and U value of 1.5 w/m2degK in place of HSR item 17.104 with 6mm glass shall have U value < 1.8, solar factor <0.35 Light transmission> 49%	sqm	1,487.00	2,237.00	3,326,419.00
47	NS-AR10	Providing and fixing 50mm thick Glass Reinforced Concrete (G.R.C) Screens in approved size, pattern, design, thickness and color of M/S Unistone make or equivalent. The Screens should be made from '53 grade' White Portland Cement manufactured by'JK Cement' or equivalent. Quartz. Fine Silica Sand. Alkali Resistant Glass Fiber manufactured by 'Saint Gobain' or equivalent, Super Plasticizers manufactured by 'BASF' or equivalent, Polymers manufactured by 'BASF' or equivalent and U.V resistant Synthetic inorganic pigments should be used for pigmentation manufactured by 'BAYFERROX (Germany)' or equivalent. The material casting should take place in Synthetic Rubber / FRP Mould manufactured by 'Reckli' or equivalent. The fixing of Screens should be 'Dry fixing' i.e. to be done with Stainless Steel (SS – 304) 'L' shaped Clamps, dash fasteners and pins	sqm	70.26	8,056.70	566,063.74
48	NS-AR11R	Supplying and applying 1.14 mm EPDM rubbergard membrane in horizontal surface waterproofing of roof consisting of Ist layer of with 200 gsm geotextile membrane on bottom, laying EPDM membrane as second layer jointed with quick seam tape, quick seam primer for jointing, form flash, adhesive, top layer 200 GSM geotextile i/c overlap, complete as per manfacturer's specifications, testing of waterproofing for 48 hrs.	sqm	3,386.93	1,123.70	3,805,893.24
		Technical parameters FIRESTONE RubberGard: MATERIAL : 1.14 mm thick non reinforced vulcanized EPDM RUBBERGARD meeting **ASTM D 4637** requirement. The sheet should be as large as possible but not less than 6m unspliced width. Weight - 1.4 kg per sqm. Tensile strength - > 9 N/ mm².Elongation - > 300 %, Tear resistance - > 35kN/m, Brittleness point - < -45 ° C,Water absorption - < 2 % Provide EPDM membrane, splice tape, primer and bonding adhesive that are **FM approved**. Identify materials with FM Approvals markings. All the materials used should be from the same manufacturer.				



4/29/2020 Gmail - Quotation for the systems

Gmail ECBC Cell Uttar Pradesh <ecbc.uttarpradesh@gmail.com>

Quotation for the systems

Ambience Solutions <callupambience@yahoo.com> Wed, Apr 29, 2020 at 5:49 PM
Reply-To: Ambience Solutions <callupambience@yahoo.com>
To: ECBC Cell Uttar Pradesh <ecbc.uttarpradesh@gmail.com>

Dear Raj.
Please find attached.

regards

Sameer Srivastava
B.E.(Hons.),Chartered Engineer
GRIHA-Certified Professional
For Green Habitats
ISHRAE- Certified Professional
For Clean Room Design
President-ISHRAE (Lucknow SubChapter)
Ambience Solutions
MM-310, Sector-D
Aliganj, Lucknow-226024
 # 9838501380
Solutions for HVAC ,Green Buildings &
Indoor Environmental Quality

"Adopt the Pace of Nature, Her Secret is Patience"

[Quoted text hidden]

Costs per Tr.xls
23K

	A	B	C	D	E
10					
11	**S.no**	**Equipment**	**Minimum EER at Full Load (Cooling Mode)**	**Minimum COP at Full Load (Cooling Mode)**	**Rate per Tr. (W.O. Tax)**
12	1	VRF System	3.02		53000.00
13	2	VRF System	3.65		59000.00
14					
15	3	Water Cooled Chiller-Centrifugal Type (< 150 Tr.)		5.4	56000.00
16	4	Water Cooled Chiller-Centrifugal Type (150 Tr. To 300 Tr.)		6.1	60000.00
17	5	Water Cooled Chiller-Centrifugal Type (> 300 Tr.)		6.3	70000.00
18					

Annexure 4: Compliance Forms

Whole Building Performance Method Compliance Form

Haryana Energy Conservation Building Code WBP Compliance Form

Project Info	Project Address: "NEW PWD Rest House" Building at Hisar	Date
		For Building Department Use
	Project Built-up Area [m^2]: 13586.4	
	Project Above-grade Area [m^2]: 13586.4	
	Project Conditioned Area [m^2]: 7967.7	
	Applicant Name and Address	
	Project Climatic Zone: Composite	

Building Classification	■ Hospitality	☐ Business
	☐ Health Care	☐ Educational
	☐ Assembly	■ Shopping Complex

Project Description	■ New Building	☐ Addition	☐ Alteration
	☐ Self-occupied	☐ Core and Shell	☐ Mixed-Use
Compliance is sought for Energy efficiency level	● ECBC Compliant	○ ECBC+ Compliant	○ SuperECBC Compliant
		EPI Ratio	0.9

The following information is necessary to check a building permit application for compliance with the Whole Building Performance Method requirements in the Haryana Energy Conservation Building Code.

Applicability			Code Section	Component	Information Required	Location on Plans	Building Department Notes
Yes	No	N/A					
Whole Building Performance Method							
✓			9.1	General			
✓			9.1.2	Compliance	As per specified in the code		
✓			9.1.3	Annual Energy Use	As per specified in the code		
✓			9.1.4	Tradeoff Limited to Building Permit	As per specified in the code		

✓			9.1.5	Documentation Requirements	As per specified in the code		
✓			9.2	Mandatory Provisions			
✓			4	Building Envelope			
✓			4.2	Mandatory Requirement	As per specified in the code		
✓			5	Comfort System and Controls			
✓			5.2	Mandatory Requirement	As per specified in the code		
✓			6	Lighting and Controls			
✓			6.2	Mandatory Requirement	As per specified in the code		
✓			7	Electrical & Renewable Energy System			
✓			7.2	Mandatory Requirement	As per specified in the code		
✓			9.3	Simulation Requirements	As per specified in the code, Bureau of Energy Efficiency Approved Software for Demonstrating Compliance with ECBC in Table 14-1		
✓			9.4	WBP Compliance Report	As per HECBC Section 9.0		