

AS FOR RESIDENTIAL EPI CALCULATION INPUT VALUES ARE BEEN TAKEN FROM ECBC 2017 24 HR BUILDING

Parameter	Metric				Imperial		
	Proposed Case	Standard Case (KSECBC)	Units	Notes	Proposed (for eQUEST)	Baseline (for eQUEST)	Units
Roof							
Construction	Construction proposed or as per site condition	Construction should achieved in correspondance to U value mentioned in Code					
U value	3.440868		1.5 W/m2 K	24 Hr use building, Standard case from ECBC 2017 Table 4-4. Proposed case calculated in software	0.606	0.264	Btu/hr-ft2-F
Roof reflectivity	0.45		0.3	default value (ECBC 2017)			
Roof Absoptance (for eQUEST)	0.55		0.7	1 minus reflectance			
Wall							
Construction	Construction proposed or as per site condition	Construction should achieved in correspondance to U value mentioned in Code					
U value	1.147		2 W/m2 K	Daytime 24Hr building, Standard case from ECBC 2017 Table 4-7. Existing case calculated in software	0.202	0.352	Btu/hr-ft2-F
Window to Wall Ratio (From LV-D report)	35.66%		40.00%	Maximum allowable WWR is 40% for Standard case. So for standard case, the WWR for Existing case should be calculated as per condition or keep same as proposed case			
Wall Glazing							
SHGC	0.76		0.27	Standard Case as per ECBC 2017 Table 4-10			
SC (for eQUEST)	0.88		0.31	Proposed case details provided by Glass manufacturer			
U Value (Conductance)	3.86104		5.7 W/m2 K	Proposed case details provided by Glass manufacturer	0.680	1.004	Btu/hr-ft2-F
Frame width	1in		1in				
Shading Depth	2ft		0	For standard case no shading to be provided			
Skylights							
SHGC	0.76		0.35	Standard Case as per ECBC 2017 Table 4-15	0.068		
SC (for eQUEST)	0.88		0.41	Proposed case details provided by Glass manufacturer			
U Value (Conductance)	6.7		4.25		1.180	0.749	Btu/hr-ft2-F
Lighting Categorization Procedure	Building Area method	Building Area method					
Lighting Power Density Allowance for Occupancy sensors?	Yes, for office ares	Yes, for office ares	4.3	5 W/m2	0.40	0.46	W/ft2
Daylight sensors?	Yes for skylight	Yes for skylight		As per 8.2.1.1, reduce LPD by 10% if allowance is to be given As per 8.2.1.3, required if daylighted area >25m2			
Equipment Power Density			2.5	2.5 W/m2	1.00	1.00	W/ft2
HVAC System Type	PSZ	PSZ					
Cool Sizing Ratio	1		1.15				
Heat Sizing Ratio	1		1.25				
Fresh Air System COP	Refer HVAC System Sheet	Refer HVAC System Sheet	5	5 cfm/person			
System EIR	Refer HVAC System Sheet	Refer HVAC System Sheet					
Supply Fan Power	Refer HVAC System Sheet	Refer HVAC System Sheet		kW/cfm			
		Rotate the North by 90, 180, 270 deg & take average energy consumption of all 4 cases as baseline					
Temp set point cool point (occupied)	24		24 ° C		75.2	75.2	
heat point(occupied)	-6		-6		20	20	
cool point (unoccupied)	60		60		140	140	
heat point(unoccupied)	-6		-6		21.2	21.2	
					73.4	73.4	
					53.4	53.4	