1. CENTRAL ATRIUM

The first strategy employs a central atrium of 10 meters wide and 4 meters high. The occupancy schedule is from 9AM-7PM, with 60m2 window glazing area per floor per facade and total occupiable area of 2310 m2 per floor. Thermal mass is included in the calculations, which are simulated to run in May. Overall, the building is comfortable between 75% and 93.2% of occupiable hours.

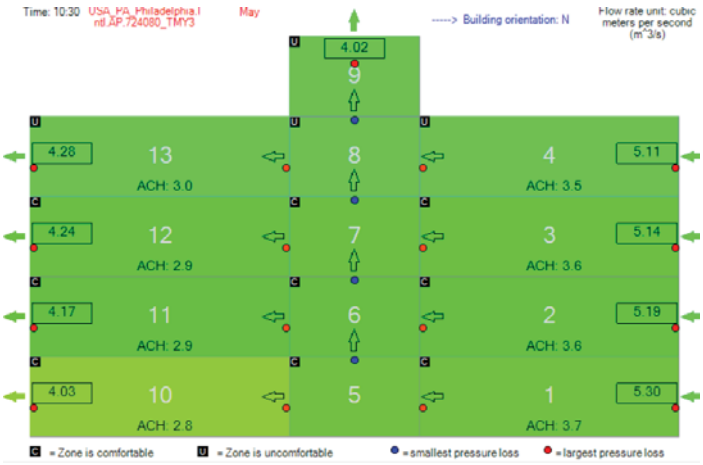
Scenario summary

Simulation type: transient

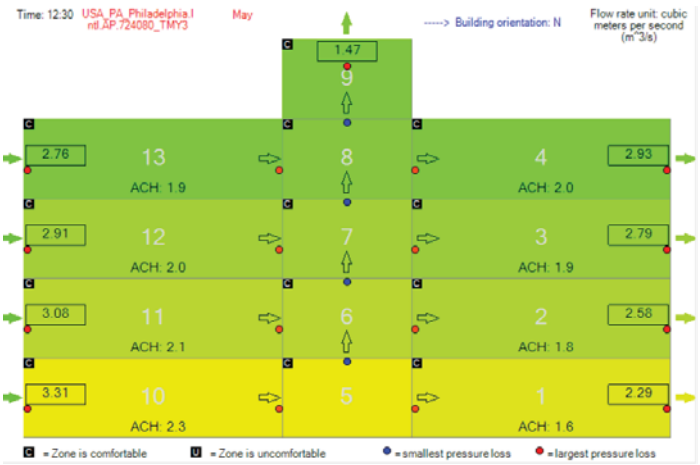
Building type: central atrium

Building footprint:	2660.0	m^2
Occupied area per floor:	2310.0	m^2
Glazing-to-wall ratio per floor:	38.1	%
Opening-to-wall ratio per floor:	1.3	%
Ratio of roof opening to roof area:	0.3	%

		9			
	13	0% hot 15.9% cold 84.1% comfort of total number of occupied hours	8		4	0% hot 18.2% cold 81.8% comfort of total number of occupied hours
	12	0% hot 11.4% cold 88.6% comfort of total number of occupied hours	7		3	0% hot 13.6% cold 86.4% comfort of total number of occupied hours
	11	0% hot 6.8% cold 93.2% comfort of total number of occupied hours	6		2	0% hot 11.4% cold 88.6% comfort of total number of occupied hours
	10	11.4% hot 0% cold 88.6% comfort of total number of occupied hours	5		1	22.7% hot 2.3% cold 75% comfort of total number of occupied hours



Airflow @ 10:30 AM



Airflow @ 12:30 PM

2. VENTILATION SHAFTS

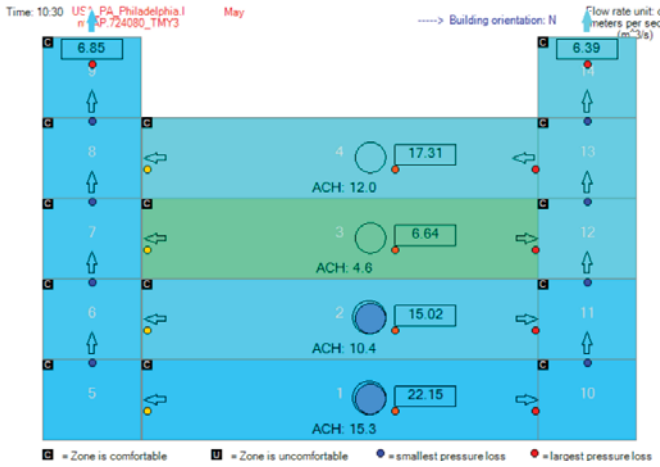
The second strategy employs 2 ventilation shafts of 10 x 10 x 10 meters. The occupancy schedule is from 9AM-7PM, with 60m2 window glazing area per floor per facade and total occupiable area of 2310 m2 per floor. A higher percentage of the windows are assumed to be operable. Thermal mass is not included in the calculations, which are simulated to run in May. Overall, the building is comfortable between 84.1% and 97.7% of occupiable hours.

Scenario summary

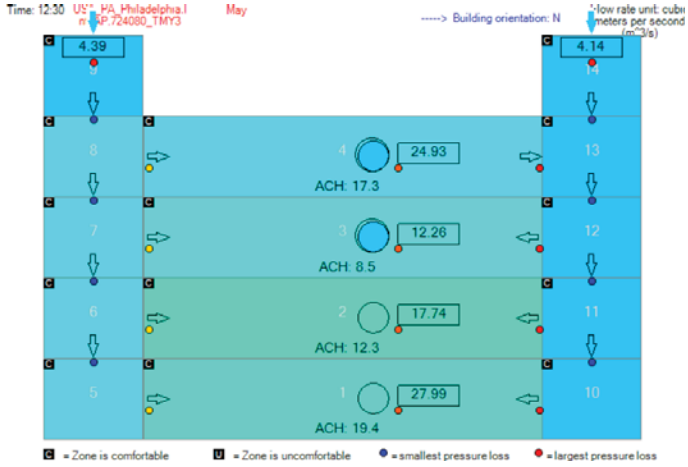
Simulation type: transient

Building type: ventilation shaft

Building footprint:	1505.0	m^2
Occupied area per floor:	1155.0	m^2
Glazing-to-wall ratio per floor:	38.1	%
Opening-to-wall ratio per floor:	6.3	%
Ratio of roof opening to roof area:	1.0	%



Airflow @ 10:30 AM



Airflow @ 12:30 PM