

“CHILLED BEAMS” IN NEW SCHOOLS

WHAT IS A CHILLED BEAM?

The SCA’s current standard for cooling individual classrooms in new schools is a system utilizing what is called a “Chilled Beam”. To provide cooling, chilled water runs through piping, or “coils” in each unit, and the orientation of the unit is horizontal, similar to a beam. The Chilled Beam system is energy efficient and is very quiet - an important feature in a learning environment.

FRESH AIR - VENTILATION

Rooftop air handlers units provide a “central” system for dehumidifying and cooling fresh air that is ducted to the chilled beams in the classrooms. This air from the rooftop unit is dry enough to balance any moist air in the classroom given off by people and equipment. As per the NYC Building Code, rooms are supplied with a constant supply of fresh air.

KEEP THE WINDOWS CLOSED!

To work properly, the chilled water coils inside the chilled beam unit must be dry. If humid air comes in contact with the coils, the air will condense, forming water on the coils, and thus the air will not flow so easily across the coils and the coils will get “gummed-up”. The water that condenses on the coils will also drip down, for which a condensate pan is provided.

Properly operated chilled beams (with dry coils) will require only occasional vacuuming; if the coils get wet, they will require actual “cleaning”.

If the windows are opened and condensation drips into the condensate pan, a sensor will automatically close down the room air conditioning. It is important to keep the classroom windows closed when the Chilled Beam system is in operation to avoid condensation.

Classrooms with chilled beams don’t have regular handles on the windows – the custodian can open them with a special key. This is so that the windows remain closed. The classroom windows should be opened **ONLY** if the central fresh air system stops working.