

## Psychology Building (0064)

The HVAC system in Psychology is original equipment from 1966. The air handling units (AHUs) were originally constant volume, converted to variable air volume in 1989. The first and second floors share an air handling unit, and the remaining floors have one unit per floor. Floors 1 through 5 combine outside air and return air to recirculate throughout the spaces, with outside air economizers that increase ventilation when ambient weather conditions are appropriate. The sixth floor is 100% outside air (no recirculation) due to the ventilation requirements of the space.

Chilled water is supplied throughout the building from a chiller located in the basement mechanical room along with being imported from the central campus chilled water district.

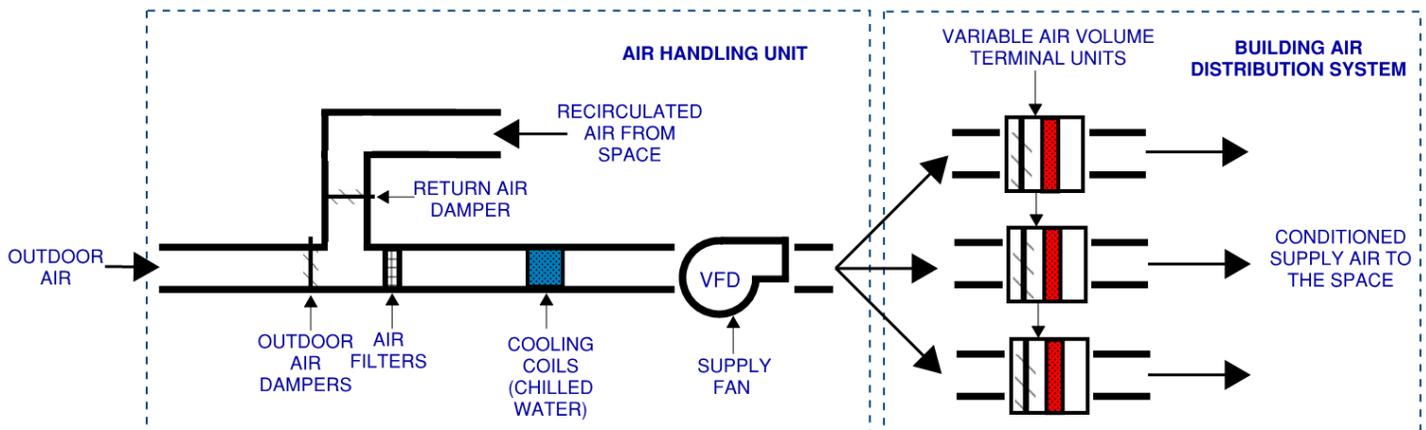
Hot water is provided by a steam to water heat exchanger that uses steam delivered from the central campus steam system to heat water used for air heating in the building.

### VARIABLE VOLUME AIR HANDLING UNITS

Variable volume air handling units deliver a variable volume of conditioned air consisting of a mixture of recirculated building air and fresh air from outside of the building. The return air is mixed with outdoor air, filtered and cooled with chilled water coils in each air handling unit before being supplied to rooms throughout the building via above ceiling ductwork.

Space heating is provided by Variable Air Volume terminal units (VAVs) with hot water reheat coils located in supply ductwork throughout the building. The VAVs are equipped with an air damper to regulate the volume of air delivered from the central AHU to the space based on the current space temperatures and a hot water reheat coil to provide space heating when needed.

Air is recirculated from the spaces back to the air handling unit and exhaust is provided in restrooms on each floor to remove odors and to maintain a slightly positive building pressurization.



**VARIABLE VOLUME AIR HANDLING UNIT SCHEMATIC**