

## Project Summary

The purpose of the visit to CAVA Harvard Square was to investigate the cause of cooling issues.

The air temperature drop across all the units is good except for BC-1 (unit with the chilled water). There is only a 3 degree air temperature drop for this unit. The entering water pipe is sweating so it is likely getting cold water, however. There is no port or balance valve to measure the temperature or flow. There was also no acceptable spot to measure using an ultrasonic meter. The tech went into an area outside of the space and there was nowhere adequate to measure flow or temp on the pipes there either.

The actuated temperature control valve is very difficult to access, but it could be a problem. It didn't seem to be responding to adjustment and it may be partially shut. Usually with this type of valve it would fail open but it seems like in this case it's not getting flow through it. The heating temperature control valve was checked as well, and it wasn't responding either. It could also be that the strainers and/or coil are dirty and need to be flushed.

Next steps are below. There is also a unit by unit summary on the next page with more technical detail.

### Next steps:

1. The strainer for BC-1 needs to be cleaned and the chilled water coil needs to be backflushed to ensure it is clean.
2. The installing contractor needs to ensure the temperature control valve is functioning properly. In other words, when the unit is in cooling, the valve needs to open 100%.
3. If there continues to be problems, a balance valve needs to be installed to measure flow and temperature. It appears from the drawing that this was new piping so this should have been installed by the installing contractor anyway. An Autoflow valve is recommended for this application since you're tying into a larger building system.