

To: Rusty Waterfield (Associate Vice President for University Services & CIO)

From: Joshua Lane

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Subject: Purchasing Cat 6a Cabling and Rewiring Constant Hall for Increased ROI

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Starting March 22, I would like to propose rewiring Constant Hall with better cabling due to the amount of service interruptions the students/faculty have been experiencing in the past semester and current semester.

Loss of class time wastes both the money going into professors/adjunct instructors' salaries as well as the student's tuition. In order to bring this plan into action: Cat 6a cabling, RJ45 outlets, and the necessary patch panels to accommodate this new cabling must be purchased as the initial investment.

A rough estimate for budgeting purposes is \$1,277.43 for the first floor and \$4,084.82 for the second floor. This comes out to be a total of \$5,362.25. This final price includes all the cabling, RJ45 outlets, and patch panels. This Cat 6a cabling produces higher speeds for much longer distances than the current 10Base-T cabling.

Cat 6a cabling is much better at decreasing noise/crosstalk due to high loads at peak class hours. The current 10Base-T allows the network to slow down to the point of being unavailable. Cat 6a also supports 10 Gigabit connection vs the slower 10Mbps that 10Base-T provides: significantly increasing speeds and capacity. I believe peak class hours have been going over the theoretical 10 Mbps capacity on the current cabling.

The source of the Cat 6a cabling provides a lifetime warranty, so it becomes a win-win situation when it comes to cost efficiency. Any damaged cabling can easily be replaced free of charge. Any maintenance will already be included via the IT department's employees on salary. Therefore, this maintenance cost will not change from the current budget. This creates a clear ROI with the network uptime significantly increasing and maintenance costs going down.

Numerous complaints have been sent to the IT department regarding this network performance issue. Therefore, I believe it is about time to make this important change.