

# Building Wiring Standards

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Date: September 17, 2013

## Purpose

“Recommendation for UM Campus Building Wiring Standard August 1999” be amended in the manner outlined below.

## Reference

“Recommendation for UM Campus Building Wiring Standard August 1999”, retrieved from [http://www.itcom.itd.umich.edu/nwg/Wiring\\_Recommendation.pdf](http://www.itcom.itd.umich.edu/nwg/Wiring_Recommendation.pdf)

“Addendum to Wiring Recommendation (re: Cat6)”, retrieved from [http://www.itcom.itd.umich.edu/nwg/Wiring\\_Recommendation\\_Addendum.pdf](http://www.itcom.itd.umich.edu/nwg/Wiring_Recommendation_Addendum.pdf)

## Background

Since the original wiring standards recommendation and the subsequent addendum, there has been a steady increase in the deployment and adoption of Voice over IP (VoIP) on the University of Michigan campus. The deployment of VoIP on campus has had the effect of transitioning telephony from a separate infrastructure to just another protocol that uses the data network as a transport. Furthermore, one of the features of VoIP handsets in use today is the ability to provide pass through network connectivity. This leads to more efficient use of the building infrastructure as the same in-wall wire can be used for both data and telephony applications. As a consequence of using the VoIP handset to provide a pass through connection for end user workstations, the wires that are installed with the intent of providing access to the analog telephony network are not currently in use and are not expected to be in the future.

## Amendments

1. For locations using Voice over IP (VoIP) telephony, change the minimum number of Category 5e cables serving a user outlet from three to two. Both Category 5e cables should be terminated for use as data jacks.
2. For locations using analog telephony, retain the current recommendation of three Category 5e cables.
3. Part B of the Building Horizontal Cabling section under the Decisions and Recommendations section of *Building Wiring Standards Recommendation* document would be changed from “It is recommended that the "Minimum" configuration for the University of Michigan be three Category 5e cables from the serving communications closet to a user outlet terminated with two phone jacks and two Category 5e data jacks.” to “It is recommended that the "Minimum" configuration for the University of Michigan be three Category 5e cables from the serving communications closet to a user outlet terminated with two phone jacks and two Category 5e data jacks in instances where the user is on the analog phone system. In instances where the user is using the Voice over IP (VoIP) system, the "Minimum" configuration for the University of Michigan be two Category 5e cables from the serving communications closet to a user outlet terminated with two Category 5e data jacks.”
4. *Recommended New UTP Configuration Options Suite* table in *Attachment A of Building Wiring Standards Recommendation* document would be changed to include a *Minimum – VoIP* row in the *Office Circuits* section with the following values:

Configuration	Phone Jacks	Ethernet Data Jacks	Cat 5e Data Jacks	Cat 5e Cables
<b>Office Circuits</b>				
Minimum – VoIP	0		2	2
Minimum - Analog	2		2	3
Enhanced	2		3	4
High Density	2		4	5

## Other Considerations

1. This amendment does not impact or modify the recommendations that govern other building infrastructure such as riser cabling and pathways.
2. Departments can choose to follow the “Enhanced” and “High Density” configuration options described in the *Building Wiring Standards Recommendation* document as they may have done in the past.