

# **Shoreline Community College Cabling Standards**

Revised January 5, 2010

## **CABLE INSTALLATION**

All cabling is to be installed by certified installers and is to adhere to ANSI/TIA/EIA-568-B cabling installation standards. Optical fiber cabling should be considered for all new horizontal cabling. The total cost, including electronics, patch cords and workstation cables, must be included in the cost analysis of any horizontal optical fiber installation estimate. New facilities will include pathway for both data and electrical service to appropriate locations for the future implementation of wireless access devices.

## **COPPER CABLING AND INSTALLATION**

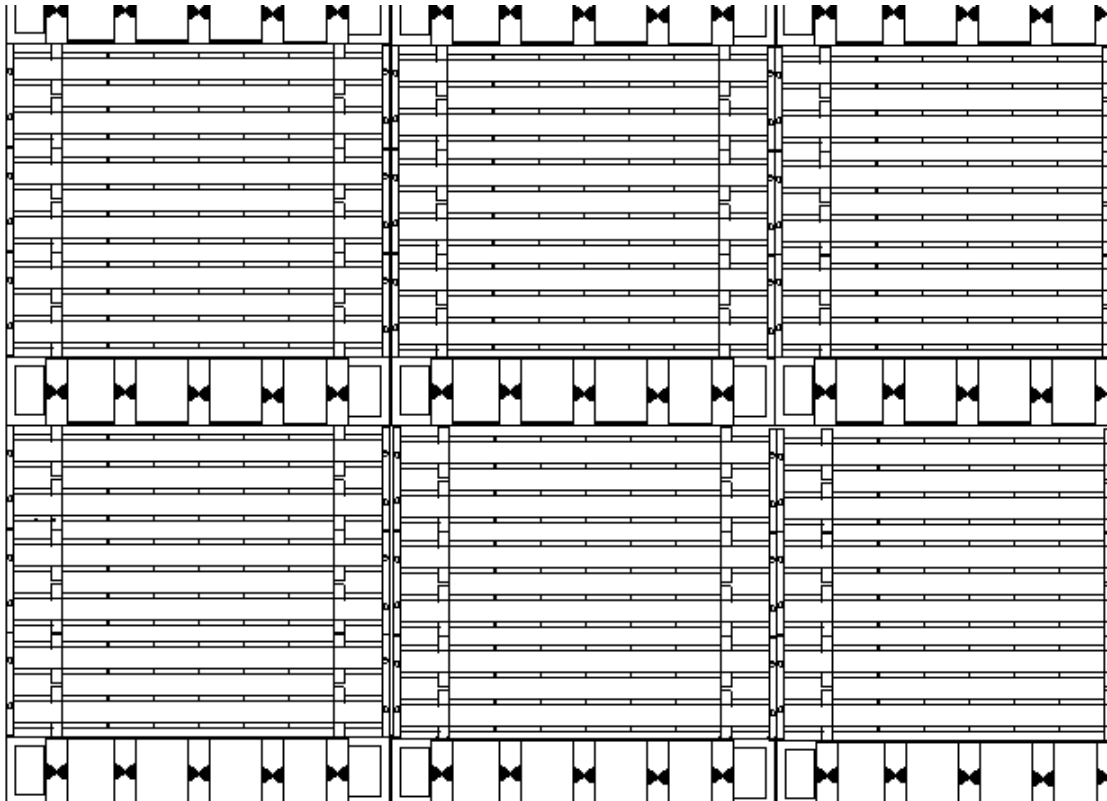
The cabling system will be Systimax GigaSPEED XL structured cabling system or equivalent. Cabling must be warranted to support up to 1.2Gpbs over four pair of wire. All workstations will consist of a modular, single-gang ivory face plate and the appropriate number of unshielded, orange, non-keyed modular jacks wired for T-568B. Cables should be routed and permanently secured out of pathways, away from lighting fixtures and other sources of electrical interference. Cable should not be allowed to rest on air circulation equipment, or any other equipment that would constitute a building code or fire code violation. Cable trays and distribution rings should be installed, in appropriate locations to secure bundles of wire.

## **OPTICAL FIBER CABLING AND INSTALLATION**

All fiber optic cable installations are to be compatible with current and anticipated 10 Gigabit standards. New horizontal optical fiber installations must adhere to the TIA-492AAAC standard utilizing 50/125 micron multi-mode fiber. Replacement horizontal optical fiber installations must be compatible with existing 62.5/125 micron multi-mode fiber at cross connect locations. Backbone optical fiber cabling will include of a minimum of 12 single mode strands (in addition to multimode fiber) for each cabling closet, adhering to the IEEE 802.3ae specification. LED light sources will be used for fiber-to-the-desktop installations for safety. All optical fiber cable is to be continuous and free from splices. A service loop of at least 20 feet is to be secured in each junction box, facility entrance point and cable closet. Junction boxes and exposed optical fiber cable is to be clearly labeled and marked with orange caution labels.

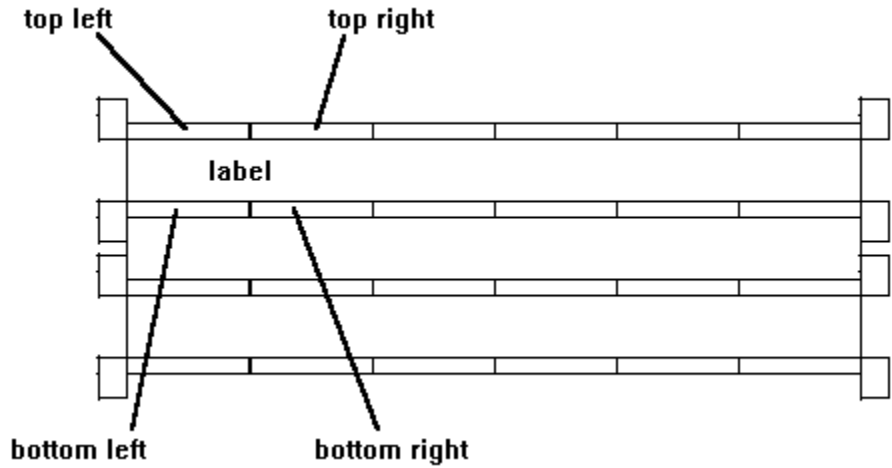
## **BACKBOARD LAYOUT - 110 BLOCKS & CABLE TROUGHS**

All copper cables are to be terminated on 110 blocks with C-4 connecting blocks mounted on a plywood backboard. New backboards will be 3/4" fire retardant plywood. Cable troughs will be located along the top of 110 blocks and repeating every 300 pair as shown below.



**WIRING CLOSET TERMINATION - FOUR CABLES PER WORKSTATION**

Cable runs from the information outlets shall be terminated in the wiring closet on a 110 block in the following configuration.



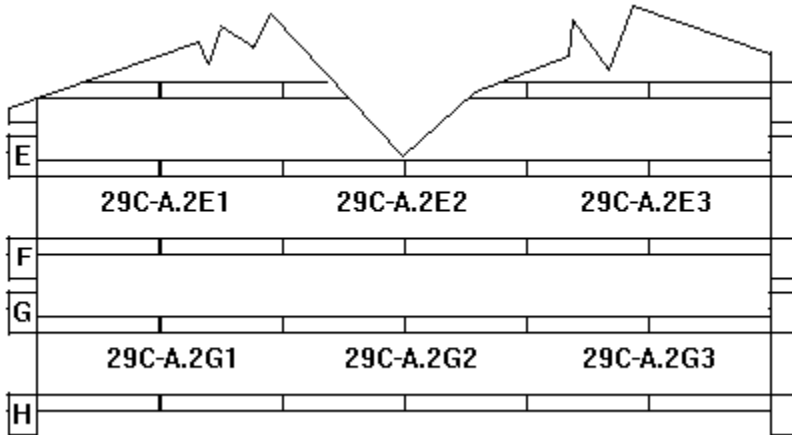
**LABELING**

Information Outlets and 110 blocks will be labeled using Shoreline Community Colleges established standard. The location of the communications closet and the termination

position within the closet can be identified by the outlet labeling, as outlined in the following example.

Outlet label **29C-A.2E3** is defined as follows:

Closet Location			110 Block Termination		
Building	Floor	Closet	110Block	Row	Position
29	C	A	2	E	3



Optical fiber is to be terminated in a lockable cabinet with the service and cross connect sides of the cabinet on different keys.

## DOCUMENTATION AND TESTING

The installer will provide “As Built” drawings showing actual routing of bundles of wire. Installer will test and provide test results for each cable. All copper cables must pass category 6 standards or better. Optical fiber is to be tested from both directions.