



University of California, Berkeley, Berkeley, California

Main Data Communication Center Relocation

Project Information

Discipline

- Telecommunications
- Mechanical & Electrical
- Fire Alarm/Security

Project Size

- 1,000 GSF

Project Cost

- Shell Hardening \$500K
- Outside Plant \$250K
- Interior Buildout \$850K
- Cable Relocation \$1.1M

Project Period

- 2007 to 2009

Schedule

- Owner initiated increases, on budget



Project Description

Ever since the beginning of the Inter-Campus Communication System project at the UC Berkeley Campus in 1999, officials associated with the project to modernize the underground telecommunications infrastructure have known they would need to relocate the main campus data communication center out of Evans Hall. The existing facility had grown organically over 30 years and become an unwieldy and cumbersome conglomeration of systems and equipment. In addition, Evans Hall itself was slated for demolition in the campus New Century Plan, to make way for a larger, more modern structure designed to meet the instructional technology needs of the Berkeley Campus.

The scope of the buildout of the facility and the relocation of cable and equipment was monumental; larger and more complex than anything the campus had undertaken in the realm of infrastructure development in modern times. As lead consultant, due to the team's long history and an ability to overcome unique challenges on the campus, the firm led four phases:

- Shell hardening: including mechanical, electrical, architectural, fire alarm and security components.
- Outside plant infrastructure upgrades: including two new underground intercept vaults and associated conduit and ductbanks.
- Tenant improvement: including final room telecommunication infrastructure buildout with new equipment racks, cable runway, fiber optic patch cable runway, Starline electrical busway, ceiling mounted CRAC units, fire alarm and security components to complete the design in anticipation of cable relocation.
- Cable relocation and equipment cutover: Relocation of 75 fiber optic cable sheaths with over 3,500 individual fiber strands. Installation of four new 144 strand trunk cables and eight new 72 strand trunk cables. Installation of ten new fiber optic distribution frames fully loaded with splice shelves and fiber optic termination shelves.

In addition to the complications of the infrastructure and cabling, there was also the challenge of coordinating the interaction with over 30 buildings, fifteen different underground vaults, nighttime shutdowns and nearly 20 different departments. The logistics of the transfer of equipment had to be precisely coordinated so that system downtime was as minimal as possible, down to the point of ten minute cutover windows.

The Salas O'Brien team of telecommunications, mechanical and electrical engineers worked for nearly 18 months to manage the design, implementation and coordination of this unique and challenging project. The recently completed project is now the UC Berkeley distribution facility for the great majority of the campus telephone, network and cable television distribution for this world class Campus.

