

## Network Appliance B2 Rack Lab & Central Plant



Project Location: 1275 Crossman Avenue, Sunnyvale, CA

Owner: Network Appliance

Contractor: Devcon Construction

Project Value: \$7.3 mil (HVAC & BAS)

**<u>Scope</u>** of <u>Services</u>: Design/Build HVAC, Electrical, Mechanical, Plumbing (MEP) Systems, and Building Automation System (BAS) expansion/upgrade as required to support new 14,000 sq. ft. High Density Rack Lab/Data Center. Green building project.

## Project Description:

ASI worked with the Network Appliance Team and Devcon Construction (General Contractor) to design and build this 14,000 square foot state-of-the-art High Density Rack Lab/Data Center while the building was occupied. This unique HD Rack Lab space utilizes a "contained cold isle" design concept and was custom-built to reside on the 1st floor of an existing 3-story building. It is NetApps largest "in-house" Rack Lab/Data Center in the United States and boasts capacity for over 720 8KW Server Racks (Lab Equipment design cooling capacity = 410 watts / sq. ft.). The innovative energy efficient system and mechanical cooling infrastructure for this Rack Lab/Data Center takes advantage of unique environmental design conditions. The Lab can operate on 100% air-side economizer for up to 80% of the calendar year. Along with full air-side economizer capabilities, the Lab is served by an "n+1" 2360-ton central chiller plant with variable-speed primary pumps, high-efficiency centrifugal chillers and counter-flow cooling towers. **\$1 M+ PG&E Rebate.** 

Project award was based on our combined technical engineering solutions associated with the HVAC and Building Automation/Controls design. ASI's MEP (Mechanical, Electrical and Plumbing) and BAS (Building Automation Systems) departments worked in concert to design and implement custom air handling equipment, air and water distribution systems, chiller plant systems and sequencing, and air-side economizer/relief systems. ASI performed certified startup and balance services and assisted in 3rd-Party Commissioning activities as required to deliver a complete and fully tested, validated and integrated High Density Rack Lab environment.

To promote energy efficiency, we provided many "Green" Solutions to this project, specifically:

- Air Side Economizers
- ALC DDC Controls
- High Efficiency Water Cooled Chillers
- Variable Speed Pumping





Condenser Water System



Chillers



Custom Data Center Air Handler