

## Featured Project

### Boucher Hill Fire Lookout Palomar Mountain State Park California State Parks

San Diego, California

Boucher Hill Fire Lookout is located in the Palomar Mountain State Park in North San Diego County. The tower was originally constructed in 1948 and consists of a 16'x16' base with a 30' tall tower. The tower sits at a 5,438-foot elevation above sea level and makes an ideal site for many communication towers and dishes to serve the county area. In addition, the California Department of Forestry (CDF), utilized this site as a fire lookout. On a clear day the ocean is visible.

The tower was in service from 1948 to 1983.

The park was planning on upgrading the facility to be used by the public with the potential for interactive learning displays. In addition, the site had experienced many direct lightning strikes in the past which caused some equipment failures. ArcSine Engineering was contracted to perform a field investigation and assessment of the existing power distribution and its infrastructure.

ArcSine performed the following duties:

- Detailed field investigation.
- Inspected the electrical distribution system for the following:
  - Current code compliance
  - Deficiencies
  - Component failures
  - Life safety
  - Energy efficiency
  - Grounding System
- Prepared a report which included all of our findings in addition to suggested recommendations for site improvements
- Designed a lightning protection system for the tower.



Electrical  
Controls  
Power Distribution  
Field Investigations  
Lightning Protection



Initial Tower



Current Tower

