



APPLE PARK CUPERTINO, CA

SDI Scope

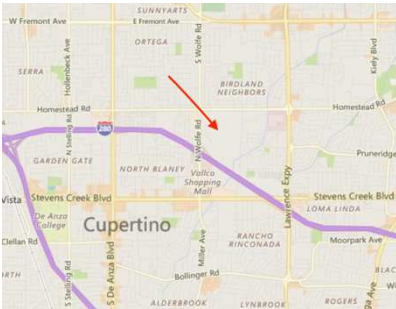
- *Structural Installation*
- *Grouting*

Contractor

Holder Construction Company

Owner

Apple, Inc.



APPLE PARK OVERVIEW

Apple Inc. constructed its new headquarters in the heart of Cupertino, California. The developed property is 176 acres, and the actual campus boasts a staggering 2,800,000 sq ft housing 13,000 employees. 30 acres of greenery form the central open park; in fact, the 100% renewable energy powered campus only covers 13% of the total land acreage, and 80% of the campus footprint is green space. The campus's graceful, circular, curved glass structure stretches one mile in circumference, 1512 ft in diameter, and nests restfully within surrounding green acres as approaching roadways and parking spaces are hidden underground.

Apple Park's bold yet inviting visual and architectural conception complement Apple's visionary, iconic ethos.

SDI’S SCOPE OF WORK

SDI’s scope of work included installation of Seismic Expansion Joints at the inner and outer perimeters of the Main Building where the building interfaces with the ground to accommodate the designed seismic movement gap of 52”. The movement capacity is 52” in all horizontal directions and a vertical movement linked to the base isolator design of 5”.

Structural joints were furnished by Mageba USA. Installation of the joints followed Mageba’s installation drawings and procedures with additional requirements for unloading, storage, and handling.

There are two basic types of assemblies, pedestrian and vehicular. The pedestrian joints are applied at the ground level and are designed to aesthetic criteria to support a stone finish and compliance with ADA requirements. The vehicular joints are applied at the tunnel entrances and loading docks and are designed to heavier load carrying ability with vertical joint assemblies serving as a traffic barricades. Both joint types have individual assemblies in between joint panels to accommodate a thermal/residual isolator movement gap.

Joints were shipped in over 75 containers from Shanghai to SDI’s San Jose headquarters. Additionally, SDI is field grouting 409 pedestrian joint cover plates.

SDI designed installation methods to work with the limited overhead clearances and finished products of other trades in the surrounding areas.

PROJECT HIGHLIGHTS AND FACTS

- Challenges include the workability of the grout and the finish tolerance of the grout required by Apple (+0”, -1/8”).
- Over 2,750 linear feet of steel plate system installation to 1/8” placement tolerance
 - 125 steel slider plates
 - 3,600 lbs.
 - 6 ft. x 24 ft.
 - 525 steel cover plates
 - 3,500 lbs. – 10,600 lbs.
 - 6ft. x 11 ft.
- Field grouting under steel slider plates required a specialized procedure and equipment.
- Geometry control at interface of adjacent work.
- Component installation through obstacles and inside of tight spatial constraints.
 - Vehicle joints installed inside of tunnels.
 - Pedestrian joints placed ½” from building façade beneath 10’ high glass canopy.

