

DPR ABD OFFICE BUILDING

2480 Natomas Park Drive, Suite 100
Sacramento, CA

2003



- First privately-owned LEED[™] certified building in Sacramento - LEED (Leadership in Energy and Environmental Design).
- “Green Building Construction” using locally produced aggregate materials in Geopier foundation elements and using recycled concrete and aggregate when available.
- The use of Geopier foundation elements contributed to the LEED[™] certification.

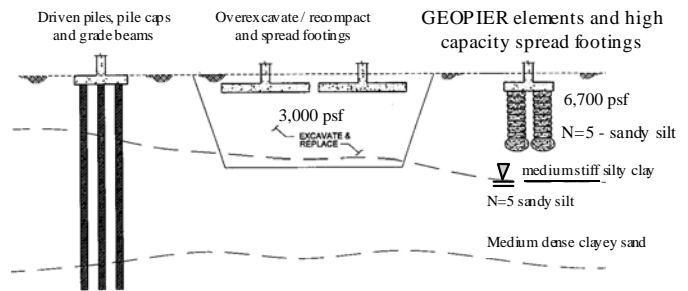
Project Description: New construction of a 2-story, 52,300 square foot, class A office building in Sacramento, CA.

Subsurface Conditions: Loose sandy silt and soft silty clay extend to depths greater than 25 feet below site grades and are underlain by inter-bedded, dense, alluvial, silty sand and stiff clay layers. SPT “n-values” averaged 4 to 5 blows per foot in the upper silt and clay soil. Ground water was encountered about 12 feet below pad grade.

Design Details: Geopier soil reinforcement was selected as a cost-effective alternate to an 8 foot excavation and replace with engineered fill. Geopier elements were installed to support conventional high bearing capacity spread footings. The allowable bearing capacity was increased from 3,000 psf to 6,700 psf and the risks of a wet bottom in the overexcavated areas was eliminated.

Geopier elements equipped with structural steel anchors were used to control seismic overturning forces at the shearwall footings.

Full-scale load tests showed a Geopier stiffness modulus of 334 pci for one 30-inch diameter by 12 foot long Geopier bearing element. Full scale uplift load tests showed an allowable uplift capacity of 60 kips with a factor of safety greater than 2.



Project Team:

- DPR Construction Inc.
- LPA Sacramento Inc.
- Culp + Tanner Structural Engineers Inc.
- Wallace-Kuhl & Associates Inc.
- Farrell Design-Build Companies Inc.

Advantages:

- Lowered overall foundation costs, so DPR could put more money into finishes.
- Helped qualify the project for the LEED[™] Certification silver medal award for “Green and Sustainable Construction” using locally produced crushed rock materials.
- Eliminated risky excavation during winter.

Geopier rammed aggregate pier support of conventional high bearing capacity spread footings and Geopier uplift elements have been used throughout California and the United States. For more information regarding Geopier and its use please contact us at (530) 621-4867 or visit us at www.farrellinc.com.

Build your next project on a Rock Solid Foundation ... Build it on GEOPIER[®]!

SACRAMENTO Business Journal

IN DEPTH: BEST IN COMMERCIAL REAL ESTATE 2003

From the January 2, 2004 print edition

'Green' building will soon be in the black

Don Lipper
Correspondent

DPR Construction is using its new office building to show local leaders the value of green construction.

The South Natomas building, which DPR shares with ABD Insurance, is the first privately owned building in the valley to receive Leadership in Energy and Environmental Design (LEED) certification by the U.S Green Building Council.

The building reduces water use more than 45 percent by deploying water-efficient landscaping, waterless urinals and dual-flush toilets. All of the occupied work spaces have outside views and interior lights adjust based on the amount of available sunlight.

The construction procedure was green too. DPR says it reduced more than 75 percent of construction waste to landfills and redirected recyclable materials back into the manufacturing process.

While the average return on investment for a green building is five-plus years, DPR says it will get its money back in half the time. The additional \$85,112 on the \$6.2 million building spent to make it "green" will return more than \$359,758 in savings over 10 years.

"I think DPR was very creative exploring alternatives and coming up with a building and a method that keeps the costs low but the quality high enough to get LEED certification," said local architect Lynn Pomeroy, one of the judges.

"We are the owner and the builder," said Neal Cordeiro, project executive and president of the DPR/ABD ownership group. "As an owner we wanted to do things that lower our operating expenses and are good for our employees. It is a no-brainer; we're just building smart here."

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