

Collin County Hangar Owners Association

Location: Collin County Regional Airport, McKinney, Texas

Submitted by: GSI Post-Tension, A DSI Company

Owner: MSF Properties

Architect(s): N/A

Engineer(s): Graham-Martin Inc.

Contractor: SDP Development

P/T Supplier: GSI Post-Tension / A DSI Company

Other Contributors: IAM Construction Corporation



Overview:

Located 30-miles northwest of Dallas, Texas, the 103,489-square-foot Collin County Regional Airport consists of 24-individual executive aircraft hangars. Through business personal property taxes and an attributed economic output of about \$101 million, the McKinney Independent School District benefits the most from the airport, generating \$2 million of certified tax revenue in 2006. As construction began in November 2006, the \$5.3 million project called for individual slab-on-ground foundations to be built on an area of land in Texas known for its expansive soil. To ensure long-term durability of the foundation, \$80,000 of post-tensioned concrete was used.

Post-tensioning was achieved using half-inch monostrand, unbonded tendons, six-inch thick monolithic ribbed slabs and 10-inch-by-30-inch perimeter and interior beams. A two-stage stressing operation, with a force of about 150-psi, prevented shrinkage cracks of the foundation's high gloss epoxy paint finish. The operation also eliminated the need for crack control joints. A significant cost reduction was achieved using post-tensioned concrete, which greatly reduced the amount of concrete required to complete the project. With very little maintenance of cracks or control joints required in the future, long-term cost savings will also be achieved. At a grand-opening in March, the city of McKinney, Texas, opened the hangar doors to a state-of-the-art Collin County Regional Airport. Beyond generating tax revenue for Collin County, the airport created a total of 470 jobs. The flying experience also is permanently enhanced when pilots land and have direct access to executive hangars. Developers of the airport were impressed by the strength and consistency of post-tensioned concrete, as they have plans to utilize unbonded post-tensioning for future projects.