Trained to Fly from Afar

Located at the Southern California Logistics Airport in Victorville, Calif., the Predator Beddown Hangar supports the U.S. Air National Guard’s mission to train military personnel to maintain and remotely launch and land the Predator — a medium-altitude unmanned aerial vehicle (UAV) designed for surveillance and reconnaissance missions. Burns & McDonnell prepared the site for the 17,500-square-foot flight training facility, 11,500-square-foot hangar and 6,000-square-foot office by installing utilities and creating an economical design. The pre-engineered hangar with a standing-seam metal roof and panel siding can accommodate three MQ-1 or two MQ-9 UAVs. Designed to house fueled aircraft, the hangar features high-expansion foam fire suppression and wet-pipe sprinkler systems, and the site design positions the ground control stations and ground control terminals within the line of site of the runway. Construction will be completed in June 2011.

For more information, contact Bill Niksch, 832-214-2893.

Securing Mission-Critical Facilities

The Nevada Air National Guard (NVANG) needed a facility to manage the sophisticated technologies and security measures required for a sensitive compartmented information facility (SCIF) to support new unmanned aerial vehicles. Burns & McDonnell designed a 36,150-square-foot air intelligence exploitation facility for the 152nd Intelligence Squadron of the NVANG located at Reno-Tahoe International Airport. “This facility relies completely on technology. We designed the SCIF to support current capabilities but also be adaptable for future advances as technological needs evolve,” says Martin Durney, Burns & McDonnell project manager. The project features low-maintenance materials and sustainable design elements while maintaining compatibility with the base architectural palette and meeting antiterrorism standards. The facility features controlled access and encompasses mission-critical support spaces for self-sustaining operations with an uninterruptible power supply, redundant HVAC and an emergency generator. Burns & McDonnell recently won an Air Force Citation award for the state-of-the-art facility.

For more information, contact Martin Durney, 973-526-5308.
One-of-a-Kind Design

The explosive waste incinerator at the Lake City Army Ammunition Plant is like no other facility. Alliant Techsystems, the plant's operating contractor for the Department of Army, wanted to take improvements beyond minimum mercury control requirements. It wanted modern system components, enhanced process control systems and efficient removal of flue gas contaminants. "Because the facility is unique, we had to customize upgrades and do rigorous testing to support compliance and long-term reliability," says Chris Snider, Burns & McDonnell project manager. "To minimize the excavation of soil potentially containing hazardous waste, we used a reinforced concrete mat foundation to avoid deep excavations." The project team opted to use an alternate method for measuring mercury emissions, which allowed instant on-site results and enhanced emission control.

The facility now meets all mercury emissions limits and can flex to meet lower limits that may be required in the future. It received the 2010 Engineering Excellence Grand Conceptor Award from the American Council of Engineering Companies of Missouri.

For more information, contact Chris Snider, 816-822-3534.

Protecting the Protectors

Protecting the Pentagon and keeping it operational are the primary objectives of the Pentagon Force Protection Agency and Washington Headquarters Services. The development of the AERIE at the Pentagon is helping make those jobs easier. In 2007, Burns & McDonnell developed a pilot common operational picture (COP) for the Pentagon by incorporating key systems, applications and databases into a traditional building information model. The COP provides real-time access to the building's systems to enhance emergency response. "While the information comes from several sources, it is integrated into a single Web interface display on a video wall," says Burns & McDonnell Project Manager Fred Terry. "The system allows the user to search systems and applications with simple mouse clicks. The integration occurs at the console and allows visual information access without data aggregation, which would create a security risk."

AERIE provides the basis for more specific dashboards that enable continuity of operations during emergencies. Burns & McDonnell began work on the AERIE in July 2009. The AERIE project is scheduled to be completed in 2011.

For more information, contact Fred Terry, 816-822-4293.