

STANTON ENGINEERING SERVICES, LLC

PROJECT DESIGN / CONSULTATION SERVICES

- Fire Suppression Systems
- Fire Alarm and Mass Notification
- Building and Life Safety Code Consultation
- Development of Life Safety Drawings and Codes Analysis
- Engineered Smoke Control Systems
- Performance Based Design Techniques

USSTRATCOM COMMAND AND CONTROL HEADQUARTERS

Stanton Engineering Services (SES) is the fire protection design engineer of record for the new 912 thousand square foot military headquarters. As a sub-consultant to HDR, SES provided comprehensive fire and life safety design and consultation services. The facility is one of only eight U.S. DoD joint forces command centers. The facility consists of three major components: an administrative facility which is primarily comprised of Sensitive Compartmented Information Facility (SCIF) spaces; A Global Operation Center with a High-Altitude Electromagnetic Pulse (HEMP) shield; and two secure data centers. The fire protection design objectives were to utilize system design techniques that limit the capability of information transfer across SCIF walls and to design system redundancies in order to ensure mission continuity.

Project Information

- New 912 thousand square foot Military Facility
- SCIF compartmentation throughout
- Highly Classified Data Center and Mission Support Spaces
- \$1.2 Billion Construction Cost



FIRE PROTECTION DESIGN

Stanton Engineering provided all fire alarm, mass notification, and fire suppression design services, fire water supply analysis, engineering smoke control systems and life safety/building code analysis. During construction, SES design engineers continued support ensuring that the design intent was maintained through to the opening day of this new mission critical facility.

Key innovative features of the fire protection system design include developing a performance based approach to provide fire protection to the Global Operations Center without disturbing the integrity of the six-sided HEMP shield.

SES also utilized design techniques for the fire alarm, mass notification and suppression systems that were used to mitigate an eavesdropper's ability to listen in on conversation within a SCIF space.

When designing the fire suppression systems, Stanton Engineering was tasked with providing a design that met n+1 redundancy such that no one event would incapacitate the building fire protection systems. To this end, SES developed an innovative interconnected water supply design that ensured no single break would leave any large portion of the facility without fire protection.

Finally, the fire alarm and mass notification system design implemented state-of-the-art intelligibility calculation software and smoke detection technology. The early smoke detection design ensures that a fire in a data center could be detected in the very incipient fire stages, such as a smoldering computer chip within a server rack.