

U.S. NAVAL CONSOLIDATED BRIG CHESAPEAKE, VIRGINIA



*Size: 210,349 S.F.
Budget: \$63,000,000
Completion: June 2011*

The new level II, medium security facility includes: general and special confinement housing; administrative areas; lobby and visiting areas; armory; kitchen and dining areas; health care facilities; training spaces; day rooms; recreation areas; and associated operations areas. The complex is designed to support 400 prisoners. As a result of its high performance and sustainable features, the new Brig facility achieved Leadership in Energy and Environmental Design (LEED®) Silver certification. Select features in this project include:

- reducing the stormwater discharge rate and volume through a vegetated roof over a portion of the building and bioretention basins;
- installing water-efficient flush fixtures, lavatories, and showers in non-secure areas to reduce potable water use by approximately 38 percent compared to standard fixtures;
- reducing water and wastewater with an innovative gray water recycling system, which collects and treats wastewater from sinks, showers, and washing machines to reuse for water closet flushing in detention areas, saving a projected 2.5 million gallons of potable water each year;
- employing energy efficiency technologies including a geothermal ground-source heat pump HVAC system and a water-to-water heat exchanger to preheat domestic hot water, reducing energy use by an estimated 30 percent compared to a baseline design;
- enhanced commissioning of the building energy systems, ensuring that those systems are designed and installed according to the owner's requirements and to optimize their energy efficiency;
- using low-emitting adhesives, sealants, paint, carpet, and composite wood products to protect indoor air quality;
- selecting GreenGuard-certified office furniture and seating to further reduce chemical emissions and maintain a healthy work environment; and
- limiting dust and particulates from entering the building through the use of high-efficiency HVAC filtration media, separated chemical storage areas, and floor mat systems at each entrance.

