

Project Profile



NTSB Training Academy Laboratory Building, Dulles, VA

The OneStep Building System provides the NTSB with a disaster resistant and energy efficient new laboratory building, achieved using only One Product, One Trade, OneStep!

OneStep-Midwest LLC
www.onestepbuildingsystem.com

The architects for the NTSB facility, Ecskoff and Associates in Washington DC, initially selected the **OneStep Building System** due to its energy efficiency and environmental benefit. However, after the tragedy of 9-11, the Disaster Resistance capabilities of the product has become an added feature. Since the world trade towers attack, the federal government has published new building requirements for strengthening federal structures. This document, The Unified Facilities Criteria Minimum Antiterrorism Standards for Buildings, details procedures for enhancing force protection to the threat of blast, fire and chemical, biological and radiological (CBR) attack. The reinforced concrete fill included in the OneStep Building System, as well as the masonry face shells used in its manufacture, make the product an ideal choice for providing this added protection.

The Energy Efficiency of the new NTSB laboratory is outstanding. In fact, because of the combination of high R-Value and dense thermal mass inherent within the OneStep walls, the laboratory was able to be built without an air-conditioning system! Instead, a system of louvers and fans was installed to exchange fresh air throughout the lab during early morning hours. The dense thermal mass of the OneStep walls then allows the building to maintain a comfortable working temperature throughout the remainder of the work day. During winter months, the lab is heated by natural gas unit heaters at minimal costs.

Construction started on the NTSB facility in October 2002, and was completed by mid 2003. The mason contractor was J.D. Long Masonry, one of the largest masonry firms on the East coast. Long Masonry recently completed the masonry reconstruction of the Pentagon, so they know first hand the effect of a terrorist attack.

J.D. Long estimator Chris Payne stated, "The use of the OneStep system just makes good sense. The product has less weight than traditional masonry and is easier to install and will definitely provide the performance our clients are seeking." Peter Salter, architect on the project with Ecskoff and Associates stated, "The product was very much like designing with traditional concrete masonry unit. We like the product and will definitely consider it for future projects."



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Project Facts:

Architect:	Ecskoff Architects Mr. Peter Salter (202) 682-1600
Mason Contractor:	J.D. Long Masonry Mr. Christ Payne (703) 550-8880
General Contractor:	Whiting Turner Construction
Material Finish:	Full-height split face, burnished & smooth colored units
Gross Sq Footage:	40,000 SF
Fire Rating:	4 hours
R-Value:	R-22
STC Rating:	61+



The NTSB Training Academy Laboratory Building was designed to significantly reduce energy bills by providing a unique cooling system. Large louvers located at the base of the OneStep walls were installed to open at night to draw cooler air into the structure. During the daytime the louvers close, trapping the cool air inside. Due to the thermal mass of the **OneStep Building System**, the wall assembly provides a thermally-efficient envelope around the structure, allowing the trapped air to circulate inside the building and maintain thermal comfort throughout the day.

