

June 30, 1942

SPINNING WIND TUNNEL

Use: Investigation of spin characteristics of airplanes with high wing loadings.

Authority: Independent Offices Act 1940; approved March 16, 1939. (Limit on construction cost \$100,000 for entire project)

Location: Plot 22, Langley Field, Va.; approved by Secretary of War May 8, 1940.

History: Preliminary work on alterations and addition to free-spinning wind tunnel started September 26, 1939. Tunnel placed in operation March 5, 1941.

Construction:

Dimensions of building	12 sided vertical polygon tunnel. Approx. 63' dia. at base and 75' high
Ground area	3,160 sq ft
Cubic contents	175,000 cu ft approx.
Character	Steel structure covered with asbestos cement siding and roofing
Type and thickness of walls	1/4" thick corrugated asbestos cement
Type and thickness of floor	5" concrete floor
Type of roof	1/4" thick corrugated asbestos cement

Cost Summary

Cost of alterations and addition to free-spinning wind tunnel	\$140,111.73
Cost per cu ft	0.801
Cost of 20' free-spinning tunnel equipment	2,603.69

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Detailed Costs

Structure		
Design	\$ 5,035.92	
Building cost	77,988.22	
Structural items added through Job Orders since completion of structure	7,852.43	
Built-in equipment	<u>36,497.73</u>	\$127,374.30
Technical and engineering services (estimated at 10 o/o of structural and built-in equipment costs - \$127,374.30)		<u>12,737.43</u>
Inventoried mechanical equipment	1,054.56	140,111.73
Inventoried instruments	120.01	
Inventoried furniture	1,245.13	
Inventoried electrical equipment	<u>183.99</u>	<u>2,603.69</u>
		\$142,715.42

Main Contractors

Contract NAW-785, W. P. Thurston Co., Richmond, Va. Started April 11, 1940; completed April 30, 1941 (estimate), price \$74,029.57

Motor and Controls - Contract NAW-824, General Electric Co. Started July 1, 1940; completed November 27, 1940, price \$25,940.00