

LANGLEY RESEARCH CENTER

FACILITY LOCATION Hampton, Virginia 23665
FACILITY NUMBER 1229
FACILITY NAME Structural Mechanics Laboratory
FUNCTIONAL NAME Structural Mechanics Laboratory
TECHNOLOGICAL AREAS Acoustic testing, static structural testing, dynamic structural testing, aircraft assembly, flow field alignment

INITIAL COST		YR. BUILT	1945	STATUS CODE	Active
ACCUM. COST	\$ 1,166 K	NASA B.O.D.	1945	OWNER CODE	NASA
LIFE EXPECT.	Indef.			OPER. CODE	NASA

CONTRACTOR NAME
(if contr. oper.)

POTENTIAL

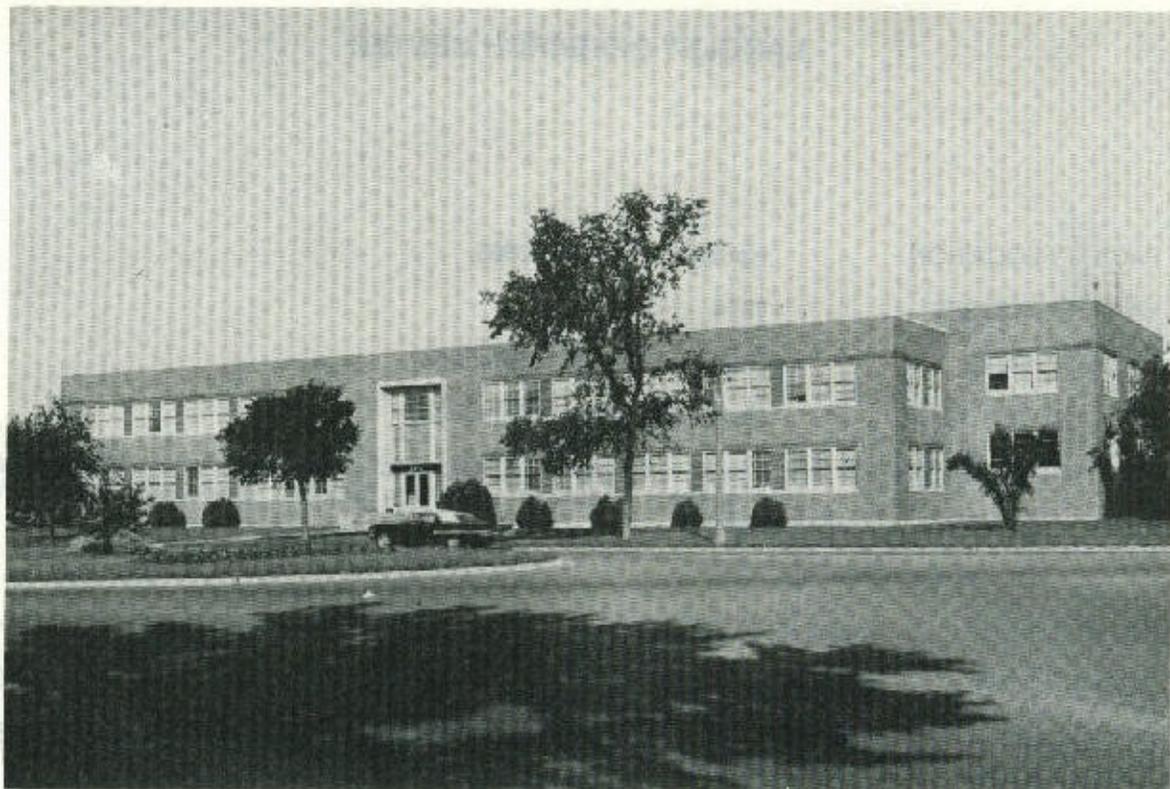
PLANS

OTHER INFO SOURCES

COGNIZANT ORG. Structures and Dynamics Division
COMPONENT

LOCAL CONTACT FOR FURTHER INFO Chief, Research Facilities Engineering Division, Code 56.000; (804) 827-3171

January 1974



DESCRIPTION

The facility has a backstop and bedplates for securing structural models when performing static and dynamic tests. It is used for aircraft hydraulic line experiments as well as for assembling aircraft for the crashworthiness program.

The facility also includes a low-power gas laser which is used in flow field alignment research on acoustic flow noise problems related to surfaces. A quiet mini-tunnel, used for small-scale aeroacoustic research on airflow surface interactions, rotating blades (rotors and propellers), and duct acoustics, is located on the ground floor at the east end of Building 1229. It is a low-turbulence, acoustically-treated, open-circuit tunnel with an air flow of 0 to 220 ft/sec. It has a 15-in. x 15-in. throat section and a 20-hp centrifugal blower.

Included in the facility utilities are a 300-psi high-pressure air supply and 440-VAC electrical energy.