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**Creator:** Beauvais, Francis N., 1918-  
**Title:** Francis N. Beauvais papers.  
**Inclusive dates:** 1941-1974  
**Extent:** 0.3 linear feet and 1 oversize folder  
**Call number:** 2009035 Aa 2; UAm

**Language:** Material is in English  
**Acquisition:** The collection was the gift of Tom Beauvais (donor no. 6667) and came to the library in 2008  
**Accruals:** No additions to the collection are expected.  
**Access:** The collection is open without restriction.  
**Photographs:** Photographs retained with the collection  
**Copyright:** Copyright is held by the Regents of the University of Michigan.  
**Processed By:** Tom Beauvais, 2007

## **Abstract**

University of Michigan Engineering School graduate (1937-1941); aeronautical engineer (1941-1945) at Ford Motor Company's Willow Run Bomber Plant; aeronautical engineer (1945-1946) North American Aviation, Inglewood, California; research engineer (1946-1980); Ford Motor Company's Research and Engineering Center, Dearborn, Michigan.

## **Biography**

Francis N. Beauvais was born in Orwell, Vermont in March 1918. He was educated at the University of Michigan (B.S. 1941). He was a member of the American Institute of Aeronautics. After graduation he was employed as an aeronautical engineer at Ford Motor Company's Willow Run Bomber Plant from 1941 to 1945 during World War II. In 1945, he accepted an offer from North American Aviation in Long Beach, California and worked in their Stress and Structures Unit from 1945-1946. In 1946, he accepted an offer from the Ford Motor Company as an engineer in the Engineering Laboratories in Dearborn, Michigan. In 1952, Ford Motor Company opened their new \$50 million Research and Engineering Center. He worked within Ford's Engineering Staff, Applied Research Office, and Product Development offices during his career. His initial work involved developing more efficient radiator fans through developing small-scale wind tunnel fixtures. Technical reports stated that "we" (Ford) pioneered in this type of radiator testing and design. Later, Beauvais established the first activity for aerodynamic testing of Ford Motor Company automobiles. The first testing was done in 1955 using the University of Detroit wind tunnel. Later, the majority of the non-Ford wind tunnel work was done using the University of Maryland wind tunnel. Some work was done at the McDonnell- Douglas wind tunnel in St. Louis. Some was also done at NASA's Langley, Virginia research facility. Three-eighths scale NASCAR Ford vehicles were also tested in the wind tunnels. In 1966, he achieved an "aerodynamic first" in designing a fixture for catapulting small-scale automobile models into a wind tunnel to test the effects of crosswind gusts. To solve this problem, he enlisted the help of University of Michigan engineering professor, Harm Buning. A test fixture was developed at the university's wind tunnel on the North Campus to run experiments. The successful results were presented at the 11th FISITA conference in Munich, Germany in 1966. Beauvais did further work involving the aerodynamic research on the crosswind effects of a car pulling a travel trailer and the results were referenced in Popular Science magazine as well as several SAE technical papers. His reputation as an expert in this field were referenced by a Chrysler research engineer in the July, 1974 Ward's Automotive Report. Beauvais's later work involved testing the micro-flow of air through the HVAC system in vehicles. Beauvais was a member of the SAE (Society of Automotive Engineers) for 34 years (1946-1980). He authored and coauthored over 20 technical papers.

### **Scope and Content Note**

The Francis N. Beauvais papers consists of paper materials and photos from World War II from the Willow Run Bomber Plant, Selective Service, wartime Office of Price Administration (rationing) during his work as an aeronautical engineer in the aircraft industry. The papers also consist of technical papers, photos, and public relations brochures related to his career at the Ford Motor Company's Research & Engineering Center including a collaborative research project with the late Prof. Harm Buning in 1966 with the University of Michigan wind tunnel on North Campus.

The papers show glimpses of a University of Michigan Engineering School graduate in aeronautical engineering starting his career in a defense plant during World War II, entering the private aircraft industry in California, after the war's end, then returning to the Detroit area to work for a Big Three automobile manufacturer--the Ford Motor Company. The value of the engineering school training can be seen in the accomplishments of Francis N. Beauvais who applied his skills as an aeronautical engineer to development of aerodynamic testing of Ford automobiles and also collaboration as an alumnus with the University of Michigan's Engineering School in 1966 in solving a problem. Included are some war time ephemera and later brochures from Ford Motor Company. A special set of 12 black and white photos was taken in 1941 showing test apparatus inside the original University of Michigan wind tunnel in the East Engineering building. There are also some color slides showing various university buildings, the Indiana v. Michigan homecoming football game of 1946, the arboretum, and some scenes around Ann Arbor.

**Box No. Description**

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**Paper records**

Miscellaneous (1 folder)

**Box 1**

Typed List of Expenses for F.N. Beauvais first year at University of Michigan 1937-1938  
 Unused "M" and Univ of Mich decals in clear envelope  
 Newsclipping ref Paul Simes and his wife Blanche 60th Wedding Anniversary (Paul Simes was retired nationally known professor at Law School at University of Michigan.)  
 Draft Card (Registration Certificate) Oct 16, 1940  
 Draft Card (Notice of Classification) June 21, 1946  
 War Ration Book (1942-1945)  
 Gas Ration Book (1942-1945)  
 Souvenir post card-Willow Run 6000th plane and stats  
 Air mail envelope with Ford Motor Co Airframe Div return address  
 Letterhead stationery with Ford Motor Co script and "Willow Run Bomber Plant" (3 items)  
 Western Union Telegram 11 May 1945 to F.N. Beauvais at Ford Bomber Plant from North American Aviation with job offer  
 Western Union Telegram 27 June 1946 to F.N. Beauvais at North American Aviation from Ford Motor Co. with job offer  
 Business envelope with "Pittsfield Village" logo, 1951  
 Floor plan for Pittsfield Village Apartment Type A (11 x 17 in.)  
 Ford Motor Company Christmas Telegrams to Employees  
 Ford Motor Co. Booklet "A Day With Ford Engineers" guide for National Press Show Jan 10, 1952 for opening of new Research & Engineering Center  
 Ford Motor Co Engineering Log Book F.N. Beauvais's first on joining the company  
 Ford Motor Co. Engineering List of assigned engineering responsibilities (specific vehicle parts, systems) to be done for 1948, with names of engineers next to items

**Out. Folder**

Ford Motor Co. publicity brochure: "An Announcement by Henry Ford II to all Ford Motor Company Dealers About a New Member of the Ford Family of Fine Cars: The Edsel" Nov 19, 1956

**Box 1**

Technical papers authored/co-authored by F.N. Beauvais as research engineer at Ford Motor Co., 1958-1974 (20 items) (include some Ford employee newsletter articles with photos of Frank Beauvais)

**Box No. Description**

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**Photos**

**Box 1 (cont.)**

Photographs probably shot by Air Force public relations Chance-Vought, 1942-1945 (2 b&w 8x 10 photos) (F4U-1 Corsair fighter plane with tail no. 274965 with side markings: "Spirit of A.W.V.S. Long Beach, New York" American Women's Voluntary Services planes were used for encouraging war bond sales)

Photo shot of newspaper clipping photo of Ypsilanti Cooperative Nursery class sitting on front of New York Central steam locomotive in Depot town, 1951 (1 b&w photograph)

University of Detroit wind tunnel and Francis N. Beauvais with probably a professor from University of Detroit (1 b&w 8 x 10 glossy photo)

Slides: Miscellaneous shots around campus, ca. 1946 (include homecoming game Indiana v Michigan; campus buildings; miscellaneous Ann Arbor views)

**Out. Folder**

Photos taken inside University of Michigan wind tunnel showing equipment and senior engineering students Frank Beauvais, John H. Fitton, dated 1941 (12 b&w photographs on 1 sheet)