

United States Air Force

# Design Awards Program



1984 Annual Report





## From the Director

In 1974, the Director of Engineering and Services established improvement of the working and living environments for our Air Force family as one of our major goals. We initiated a number of efforts aimed at achieving this goal. We emphasized our desire for quality design, implemented procedures to improve selection of talented design-oriented firms to design our facilities, developed better design guidance and began several major facility improvement efforts such as the commissary program. We also instituted the Air Force Design Awards Program. This report on the 1984 award winning projects reflects only part of the successful efforts of the engineering and services community.

Although we can justifiably point with pride to our achievements during the past 10 years, we are faced with new challenges. We must continue to design and build quality facilities and we must find ways of getting more construction for our money. We must reexamine the way we do our business from establishing facility requirements to our construction, financing and management methods.

The Air Force, as well as the rest of the federal government, can set an example for cost-effective, energy-wise and quality construction. We cannot avoid the challenge and we cannot afford to fail. I solicit your continued commitment to excellence.

**CLIFTON D. WRIGHT, P.E. and HAIA**  
Major General, USAF  
Director of Engineering and Services



# Background

Projects submitted for consideration in the annual USAF Design Awards Program are reviewed by a distinguished jury composed of two members of the American Institute of Architects and two members of the Society of American Military Engineers. Awards are given in two separate categories—completed projects and concept projects.

The Air Force sets no limitations on either the number or the type of projects that can be recognized each year. Awards may be given for design excellence in a number of areas, including architecture, interior design, landscape design, energy conservation, and civil and structural engineering. All projects are given equal consideration, whether designed by base civil engineering personnel, the design agent or an architectural-engineering firm.

The jury for the 1984 USAF Design Awards Program reviewed 84 projects submitted for consideration and selected five completed projects and ten concept projects for recognition. The award winning projects included two medical facilities, two commissaries, two administrative buildings including the headquarters for the new Space Command, a number of flightline and support facilities and one project designed by a base civil engineering organization.

Three Air Force projects or programs received Federal Design Achievement Awards in the 1984 Presidential Design Awards Program. These projects are covered also in this report.

## 1984 USAF Design Award Program Award Winners

### Completed Projects Honor Awards

Interior Design  
Air University Library  
Maxwell Air Force Base, Alabama

Commissary  
McGuire Air Force Base, New Jersey

### Completed Projects Merit Awards

Alert Facility  
Tinker Air Force Base, Oklahoma

Ground Support Equipment Shop  
Birmingham Municipal Airport, Alabama

Picnic Pavilions  
Patrick Air Force Base, Florida

### Concept Projects Honor Awards

David Grant Medical Facility  
Travis Air Force Base, California

Control Tower  
Edwards Air Force Base, California

B1-B Bomber Hanger  
Dyess Air Force Base, Texas

### Concept Projects Merit Awards

Medical/Dental Clinic  
RAF Fairford, England

Dining Hall  
Hancock Airport  
Syracuse, New York

NORAD and Space Command Headquarters  
Peterson Air Force Base, Colorado

Communications Command Headquarters  
Scott Air Force Base, Illinois

Integrated Support Facility  
F. E. Warren Air Force Base, Wyoming

Engineering Analysis Facility  
Arnold Air Force Station, Tennessee

Commissary  
Vandenberg Air Force Base, California



Completed Project

# Honor Award

Interior Design  
Air University Library  
Maxwell Air Force Base, Alabama

Architects: Sherlock, Smith and Adams, Inc.



Good selection of colors, material and furnishings is combined with attention to details and to the functional requirements of the users to create an attractive and highly usable environment for the Air University library.

The library supports the instructional and research functions in training military leaders at the University. The design program requirements included providing an attractive, uncluttered environment conducive to study, satisfying a large number of functional requirements related to book and document systems, and creating a design which will endure over time.

Systems furniture is used to provide sufficient workstations, conceal the normal clutter of paperwork and increase storage and future flexibility. Seating clusters of curved, modular furniture are used within the larger spaces to enhance the quality of personal space.

The selection of appropriate furnishings throughout the library provides unity and simplicity of design. A comfortable and attractive chair is used with variations in color and grade of upholstery. The polished chrome chair frame relates to the polished chrome finish on the structural columns.

A simple palette of warm colors, selected artwork and use of oak finishes for the shelving, card catalogs and desks and tables provide additional design continuity.

*AFRCE: Eastern Region*

*Host Command: Air Training Command*

*Using Command: Air University*

*Base Engineering: 3800th Civil Engineering Squadron*

*Design Agent: Corps of Engineers/ Mobile District*





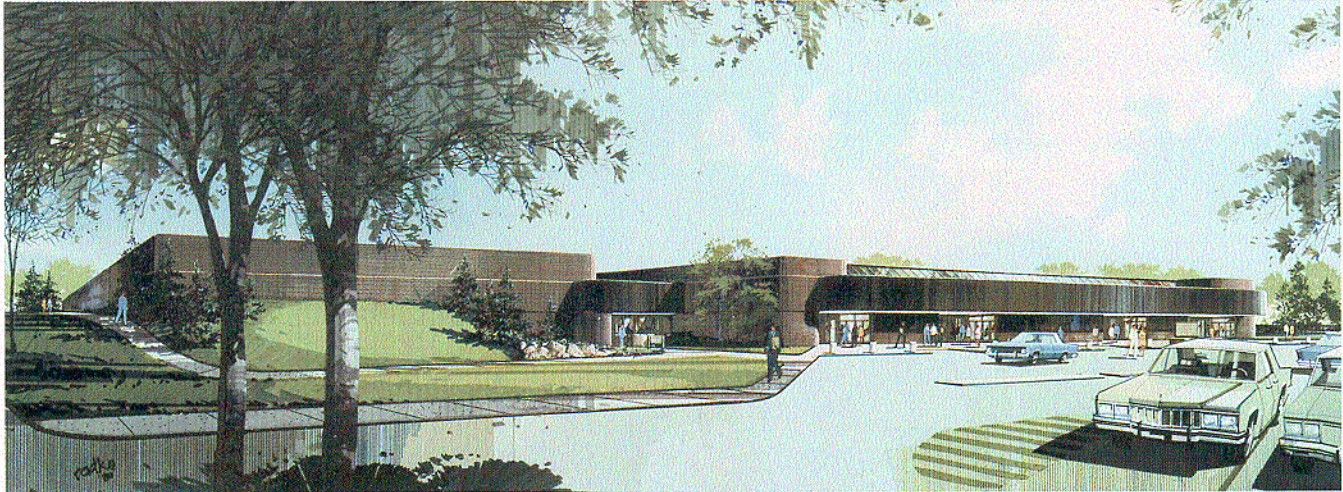


Completed Project

# Honor Award

Commissary  
McGuire Air Force Base, New Jersey

Architects: Wilson/Jenkins & Associates



One of the charters of the Air Force Commissary Service when it was established in 1976 was to improve commissary facilities worldwide. This goal has been accomplished with both speed and quality. Forty-three new stores have opened, 15 new stores are under construction and 11 more stores are under design. Moreover, 14 commissary projects have received Air Force design awards.

The new commissary at McGuire Air Force Base has an attractive and functional interior, a pleasing brick exterior carefully designed to evoke human scale, and the building compliments and enhances its environment. Supergraphics and colorful artwork add visual interest to the interior.

*AFRCE: Central Region*

*Command: Military Airlift Command*

*Base Engineering: 438th Civil Engineering Squadron*

*Design Agent: Air Force Commissary Service*





Completed Project

# Merit Award

**Alert Facility**  
**Tinker Air Force Base, Oklahoma**

Architects: HTB, Inc.

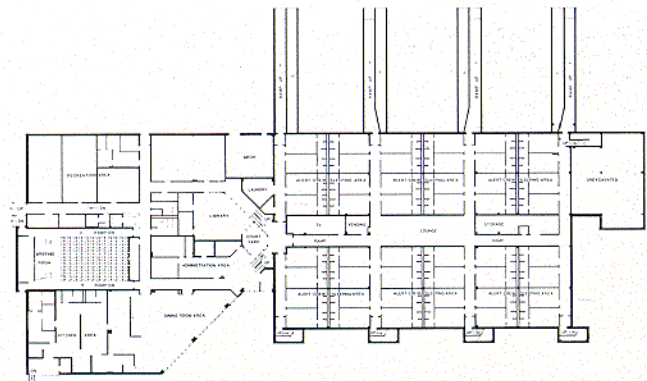


The diverse requirements for this project are resolved into a simple, strong architectural statement, punctuated by the flightline surveillance tower and four access tunnels reaching out toward the aircraft apron. This building serves aircraft crews on short or long term alerts and includes space for sleeping, recreation, food service, administration and aircrew briefings. Also included in the building is the flightline surveillance tower and a small fire station.

The design successfully accommodates several major design parameters, including insuring maximum security for the aircraft and crews, affording rapid access to the aircraft apron for the crews and minimizing aircraft noise. The four tunnels lead directly from the sleeping and recreation areas to the apron. A number of design features were used to address the 80-85 Ldn noise levels from nearby aircraft. Precast concrete was used for the structure to provide the necessary mass needed to attenuate sound. In addition, earth berms help dampen and deflect the sound waves.

There is limited glazing in the exterior walls except for those walls of the lobby and dining area which are located on the side opposite the flightline. Double glazed skylights, plus a central courtyard enclosed by a large skylight, are incorporated into the design to provide some natural light and to minimize any claustrophobic effects.

Energy consumption is minimized by using added insulation and incorporating a number of energy conservation features into the electrical and mechanical systems.



FIRST & LOWER LEVEL FLOOR PLAN ALERT CREW BUILDING.



*AFRCE: Central Region*

*Host Command: Air Force Logistics Command*

*Using Command: Tactical Air Command*

*Base Engineering: 2854th Civil Engineering Squadron*

*Design Agent: Corps of Engineering/ Fort Worth District*

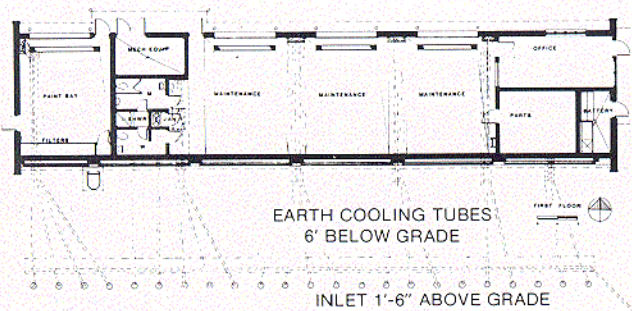
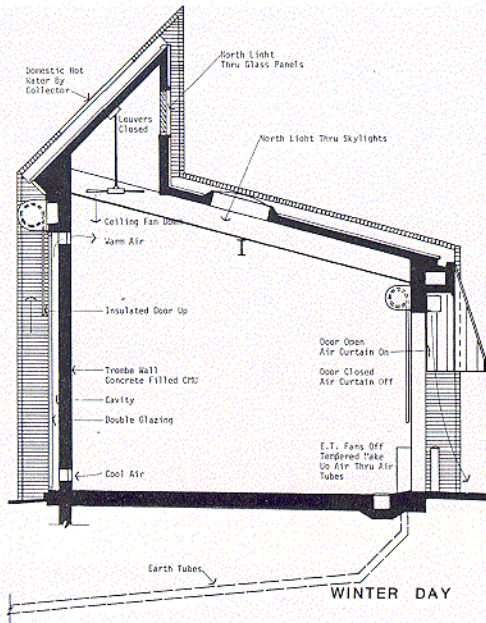


Completed Project

# Merit Award

Ground Support Equipment Shop  
Birmingham Municipal Airport, Alabama

Architects: Waters/Barrows & Associates



A number of passive and active solar design principles were incorporated into the design of this shop building to minimize energy costs.

The building contains three service bays, a paint bay, an office, and storage and support space for the Alabama Air National Guard. Construction is simple. The exterior walls are masonry cavity walls with cavity and rigid foam board insulation. Roof deck construction is a composite of cementitious wood fiber deck and urethane foam insulation, covered by a standing seam aluminum roof.

A trombe wall of concrete-filled masonry blocks is incorporated into the design of the south wall of the service bays. During winter days, cool air is drawn from the floor level of the bays into the air cavity between the exterior double glazing and the trombe wall, is heated by the sun and flows back into the top of the service bays. Ceiling fans push down the warm air. During winter evenings, exterior insulated rolling doors are closed to prevent heat loss from the trombe wall. Heat radiates from the trombe wall into the bays. Deciduous trees shade the trombe wall during the summer.

Additional passive solar features include north-facing clearstory windows with louvers to exhaust summer heat, earth tubes buried beneath the building to provide cool air in the summer and to temper make-up air in the winter, and ceiling fans which help to exhaust hot summer air.

Interactive photocells and outdoor thermostats provide automatic control of the various mechanically assisted solar features. Active solar panels provide domestic hot water and hot water for washing down equipment in the paint bay.

AFRCE: Eastern Region

Command: Tactical Air Command National Guard

Base Engineering: 117th Civil Engineering Flight

Design Agent: National Guard Bureau





Completed Project

# Merit Award

Picnic Pavilions

Patrick Air Force Base, Florida

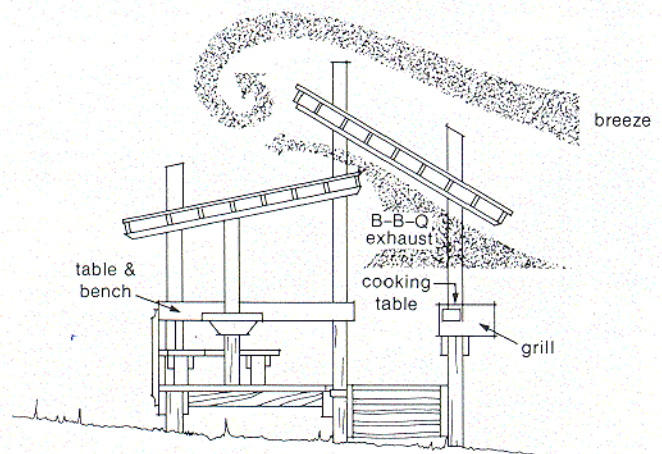
Architect: Charles H. Clinchard, 6550th CES



Scattered among mature Australian pines along the banks of the intra coastal waterway, these six picnic pavilions blend with the trees and retain the unspoiled nature of the site. The pavilions are carefully detailed and constructed of rough-sawn cedar and galvanized metal roofing and fasteners which will weather to a soft gray color.

The roof design induces air circulation to exhaust smoke from the cooking area. Table layout and an access ramp will accommodate the handicapped.

Command: Air Force Systems Command  
Base Engineering: 6550th Civil Engineering Squadron

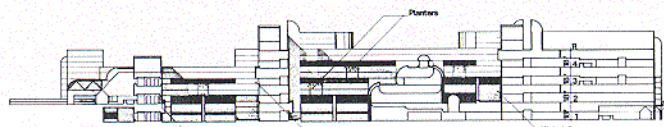
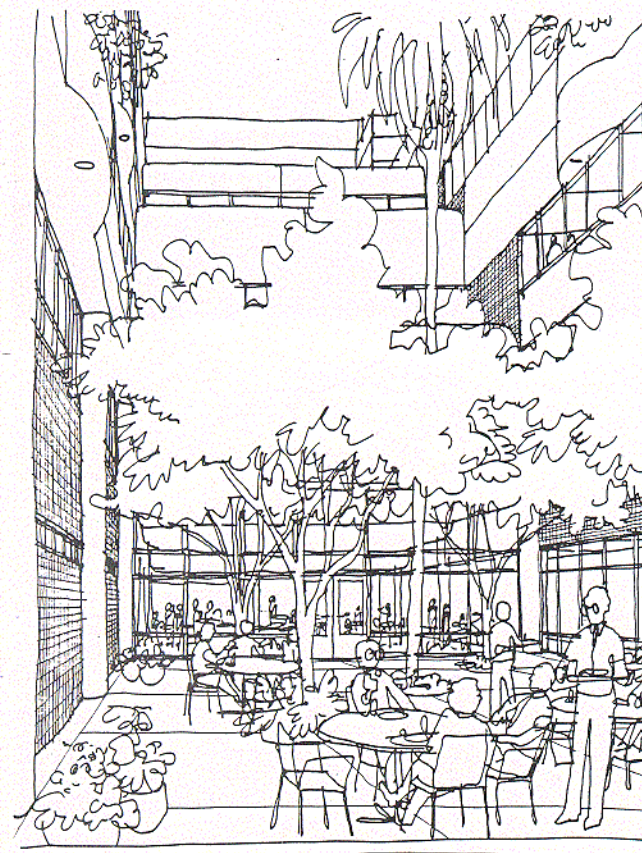
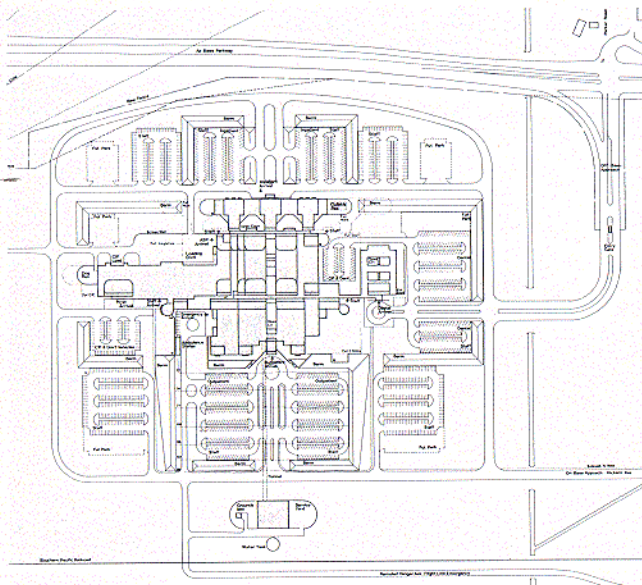




# Honor Award

David Grant Medical Facility  
Travis Air Force Base, California

Architects: The NBBJ Group



Development of a major medical facility has significant impacts on an Air Force community, not only by providing state-of-the-art medical care for military personnel and their dependents, but also by the size, scope of operation and image of the facility.

The David Grant Medical Facility is no exception. This 800,000 square foot replacement hospital includes clinics, nursing care and diagnostic and treatment facilities. Although the hospital has been designed to an extremely austere and complex architectural program, the design successfully uses this complex program and the resultant idiosyncratic elements to create a rich massing that belies the size of the project and offers a strong architectural statement.

The tight square foot scope for this hospital was the primary factor that determined the shape of the complex. This factor, coupled with the requirement that no room over 50 square feet could vary by more than 15 percent from its programmed size without justification, prohibited modular planning concepts or simple enclosures. Other program requirements also affected the building form. The nuclear magnetic resonance facility, essentially a huge magnet, could not contain any ferrous materials and was designed for concrete block construction in a cylindrical, self-bracing shape. The shape of the nursing tower is a product of the study of travel distance versus space requirements versus surveillance. In addition, each patient room and each treatment room of the dental clinic required natural light.

The site also contributed to the form of the hospital. The seismic zone 4 siting, poor soil bearing and a high water table discouraged construction of a basement or a multi-story building.

The building is divided into three zones - diagnostic and treatment is located between the clinic and the nursing functions to provide central services. The zones are defined by major circulation corridors which also serve as spines for the expected 25 to 40 percent future expansion. Elevator towers and airshafts accentuate the corridors.

*AFRCE: Western Region*

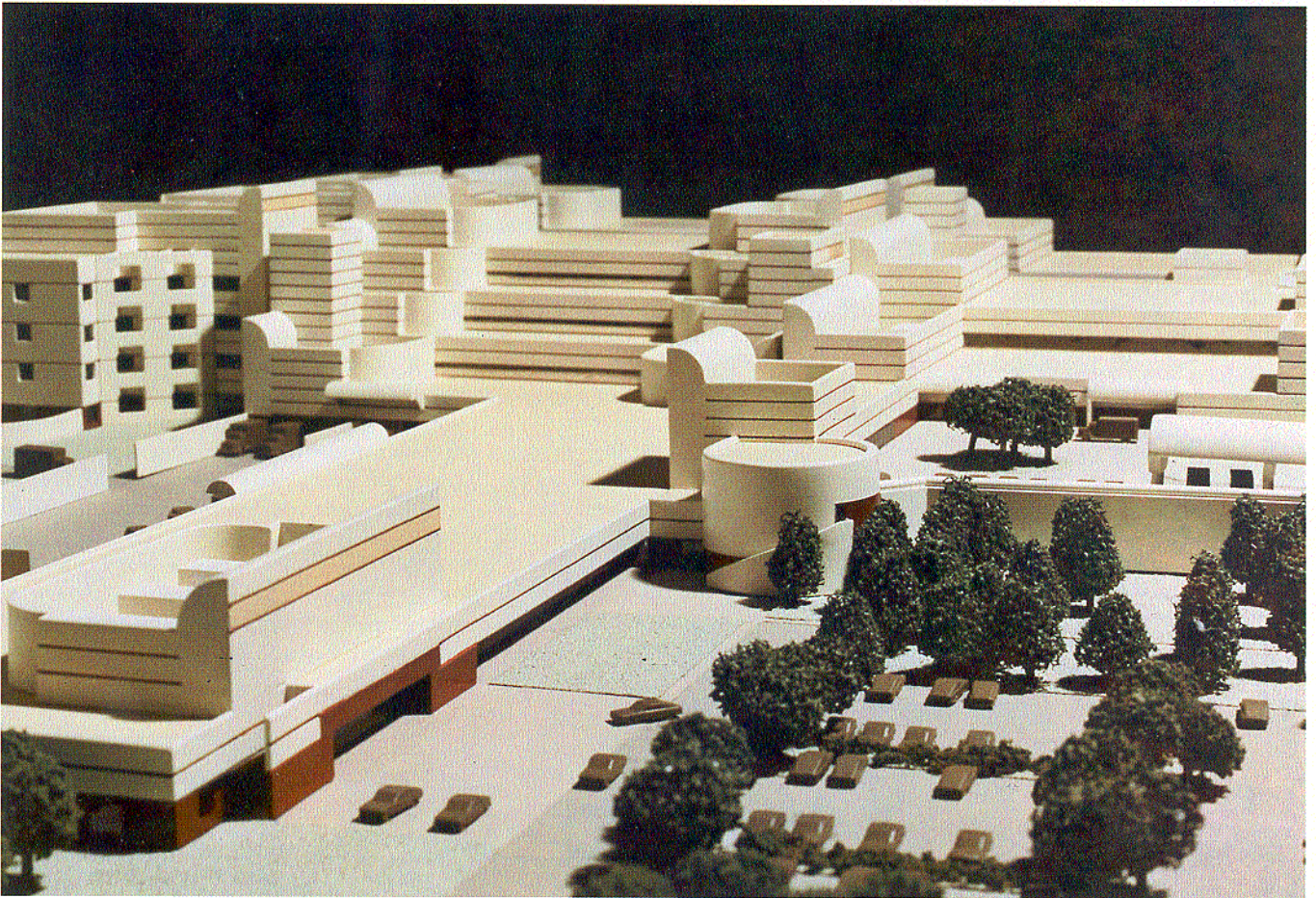
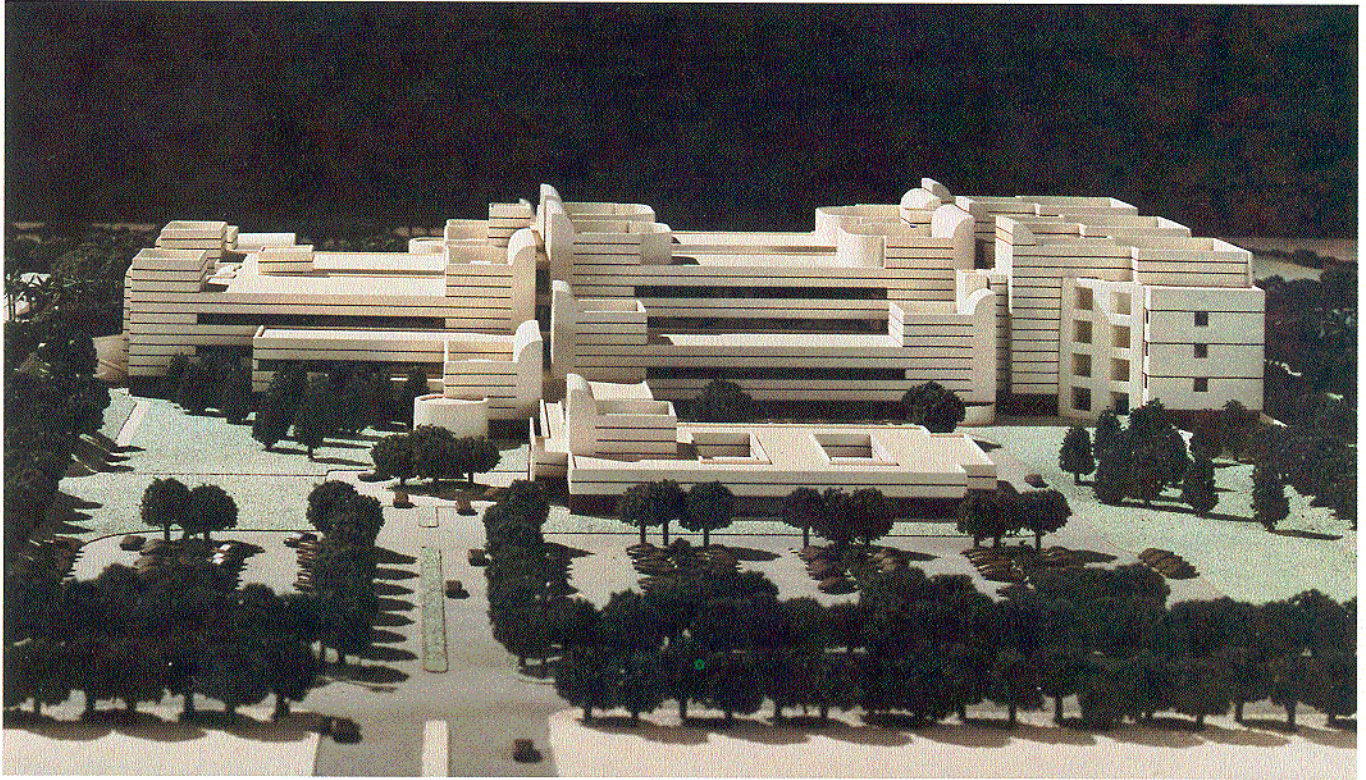
*Host Command: Military Airlift Command*

*Using Command: Office of the Surgeon General*

*Base Engineering: 60th Civil Engineering Squadron*

*Design Agent: Naval Facilities Engineering Command,  
Western Division*







Concept Project

# Honor Award

Control Tower  
Edwards Air Force Base, California

Architects: Andersen-Bjornstad-Kane-Jacobs, Inc.



Nearly double the height of the standard Air Force control tower, this structure stands as a bold symbol of the unique mission in experimental flight and space exploration at Edwards Air Force Base. The control cab level of the tower is 135 feet above grade and offers visibility of both the main runway and runways located on the adjacent dry lake bed.

The form of the tower responds to the operational requirements and the unique structural requirements generated by the seismic zone 4 location. An air traffic controller requirement restructuring horizontal drift due to wind loads and seismic activity resulted in exceptionally structural stiffness requirements. A hexagonal floor plan with flared structural steel legs at the points of the hexagon is used to satisfy this requirement and to resist overturning.

The exposed steel columns coated with vinyl and infill panels of glass fiber reinforced concrete will provide minimum maintenance.

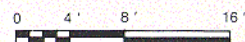
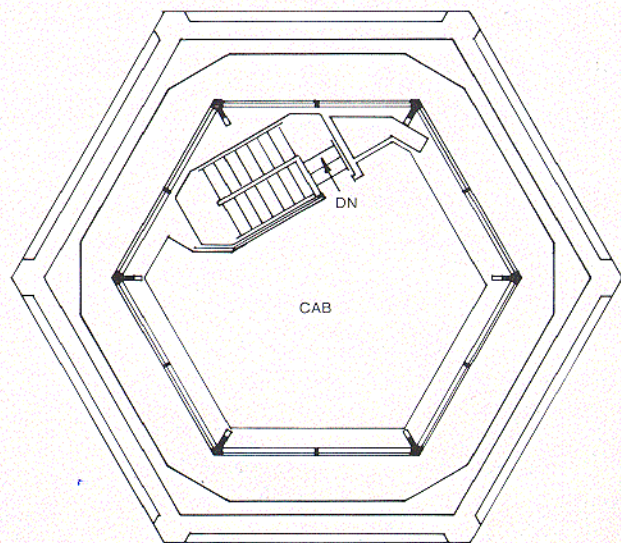
Additional design parameters included satisfying unusual acoustical requirements generated by adjacent engine test runup pads and glazing the control cab to meet high wind loads without the use of heat strengthened glass which can distort the visibility for air traffic controllers.

*AFRCE: Western Region*

*Command: Air Force Systems Command*

*Base Engineering: 6510th Civil Engineering Squadron*

*Design Agent: Corps of Engineers/Sacramento District*



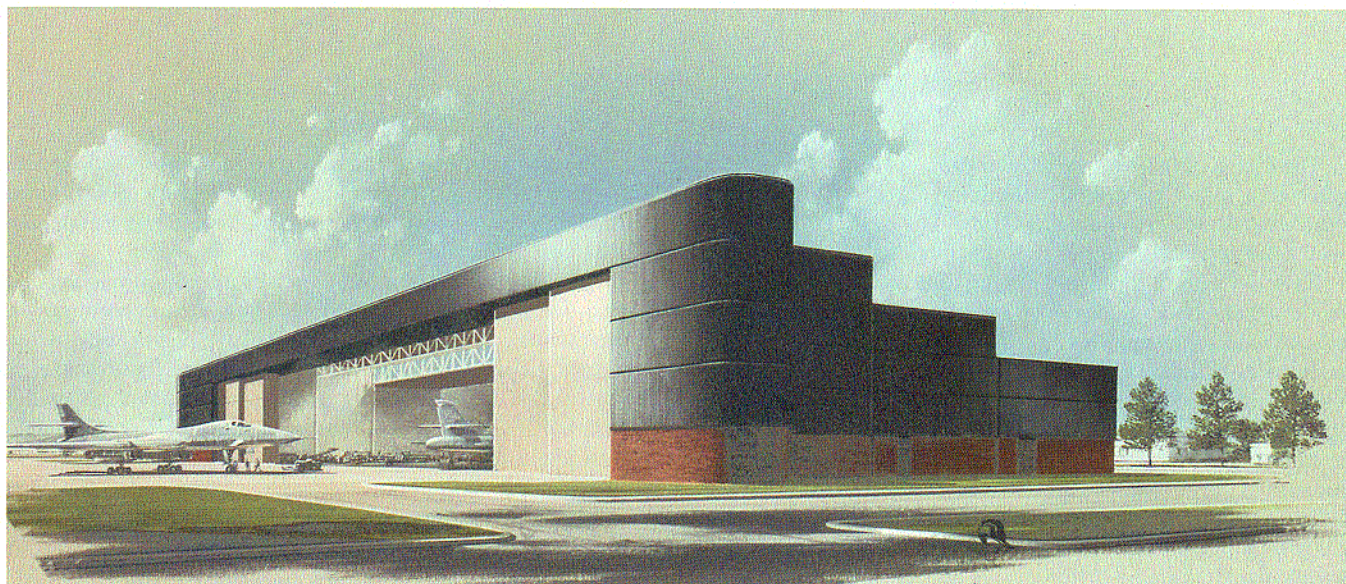


Concept Project

# Honor Award

**B1-B Bomber Hanger**  
Dyess Air Force Base, Texas

Architects: Frankfurt-Short-Bruza



This 90,000 square foot aircraft maintenance hanger serves as the focal point for a complex of new buildings supporting the new generation aircraft, the B1-B bomber. The hanger contains 20,000 square feet of office and maintenance space, plus three aircraft services bays which cover an area larger than two football fields and are taller than a five-story building.

The design utilizes stepped roof levels corresponding to the required aircraft clearances from tail to nose. Translucent insulated panels at the steps introduce natural light into the hanger.

Exterior materials and colors were selected for durability and compatibility with the base architecture. Large-scale brick was used on the lower walls. Striated, baked enamel panels cover the upper part of the hanger.

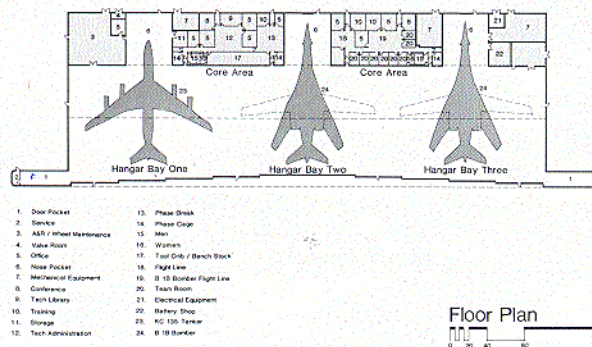
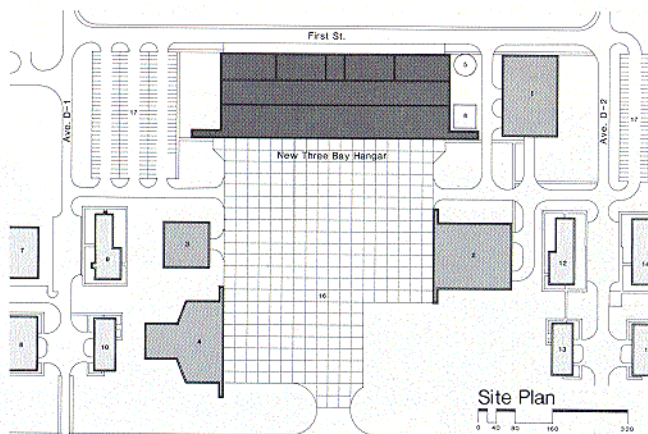
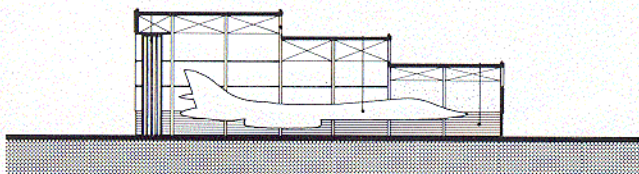
Sophisticated overhead and underwing fire detection and suppression systems and numerous energy conservation features are incorporated into the design.

*AFRCE: Central Region*

*Command: Strategic Air Command*

*Base Engineering: 96th Civil Engineering Squadron*

*Design Agent: Corps of Engineers/Fort Worth District*





Concept Project

# Merit Award

**Medical/Dental Clinic**  
**RAF Fairford, England**

**Architects: Percy Thomas Partnership**

The design of this medical/ dental clinic successfully creates a refreshing, subtle, post-modern building that still is compatible with the architecture of a United States Air Force Base located in Gloucestershire, England.

Exterior walls of this two-story building are clad in buff bath brick, which echoes the honey-colored stone used on base and locally. Blue/grey trim and pitched roofing compliment the wall color. The scale of the building is reduced by use of indigenous shrubs and trees and by an earth berm planted in a variety of ground covers.

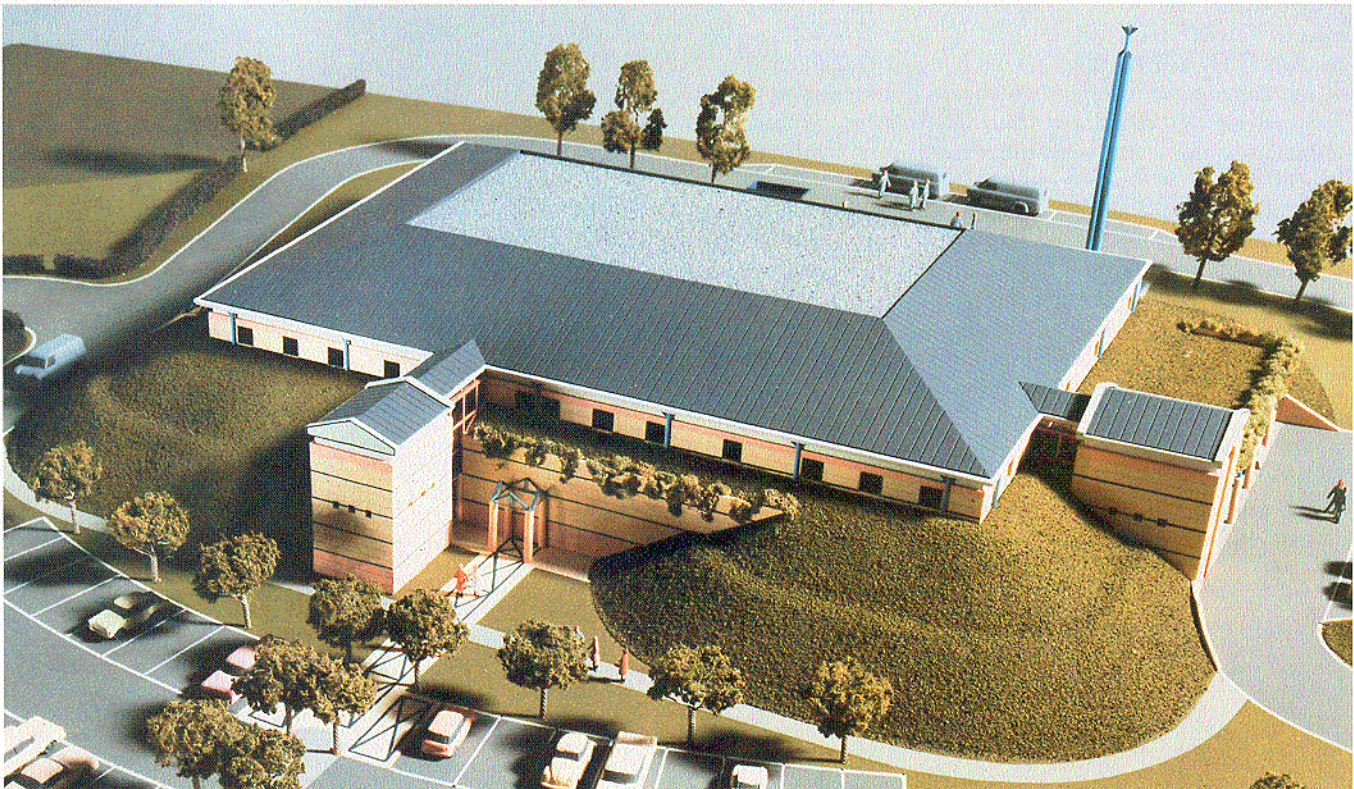
Articulated stair towers, entrance canopies and a sculptural mechanical tower add additional architectural interest.

The 32,800 square foot clinic provides a variety of outpatient, diagnostic and dental services to the military personnel and their dependents. The lower level is mostly underground and will be used as a second echelon medical facility which is designed to remain operational in a chemical/biological warfare environment.

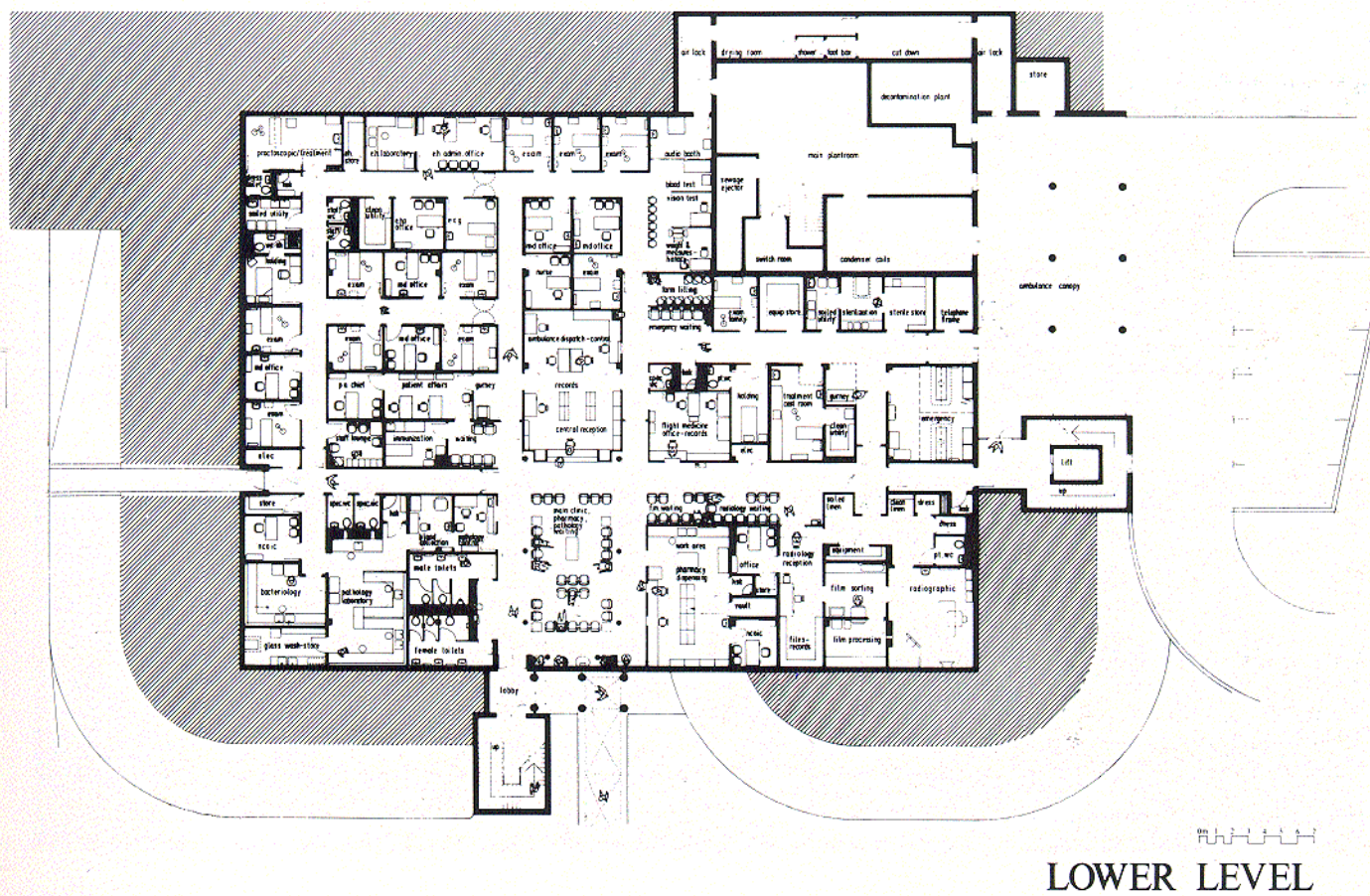
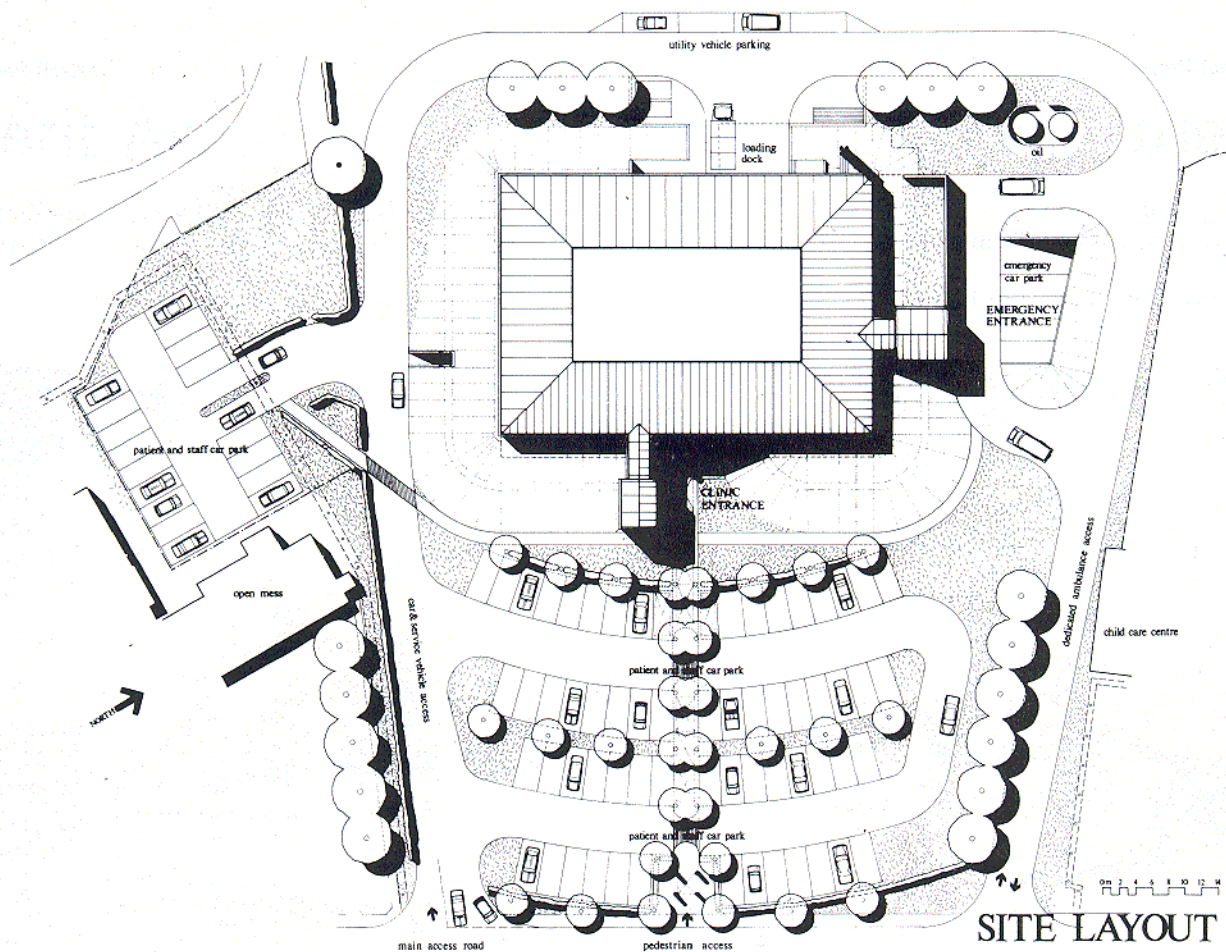
The pitched roof is a unique aluminum composite design that enables the roof to comply with energy conservation requirements and provides ease of installation and maintenance at a reasonable cost.

The clinic will be air conditioned by a medium velocity dual-duct, variable air volume system. The system incorporates an "economizer" cycle of operation whenever outside air conditions permit. Control of this cycle, which uses the thermal potential in the outside air and the recirculated air, will be initiated by an enthalpy sensing device. This is particularly valuable in the maritime climate of the base.

*AFRCE: United States Air Force Europe*  
*Host Command: United States Air Force Europe*  
*Using Command: Office of the Surgeon General*  
*Base Engineering: 7020th Civil Engineering Squadron*  
*Design Agent: Department of the Environment,*  
*Property Services Agency*









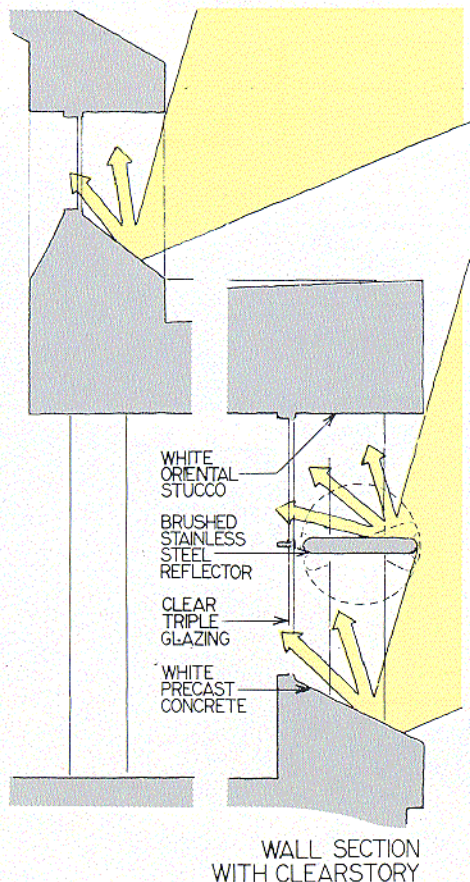
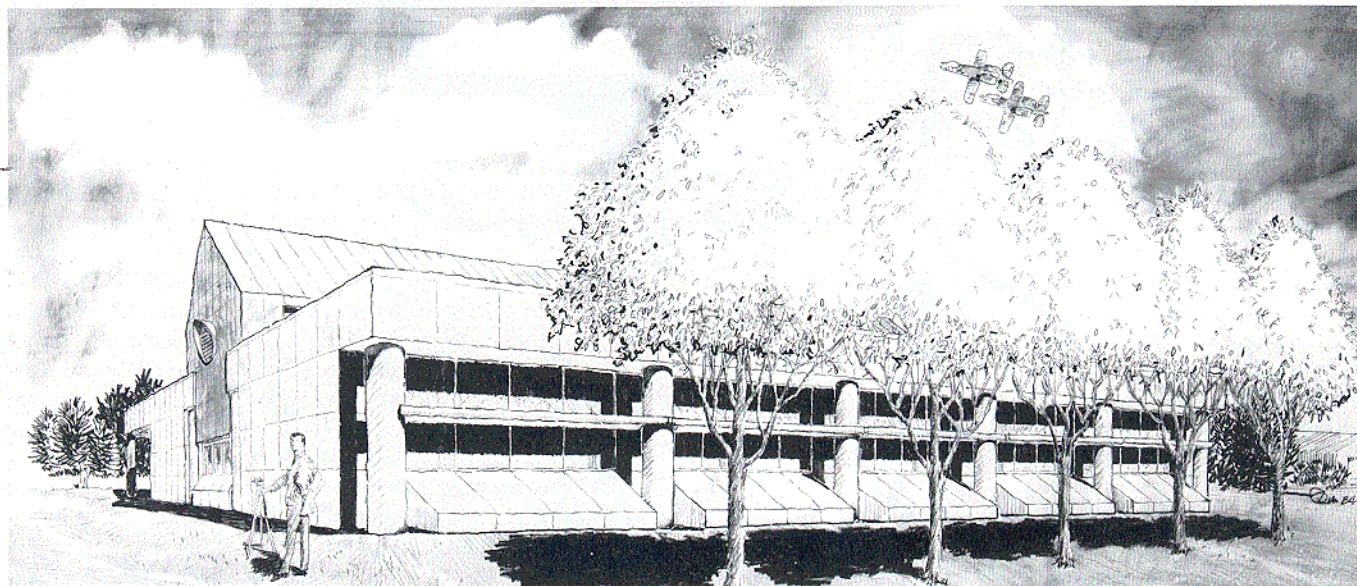
Concept Project

# Merit Award

Dining Hall

Hancock Airport, Syracuse, New York

Architects: Quinlivan Pierik & Krause

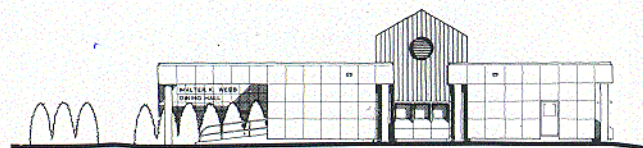


This new dining hall is an attractive, multifunctional building which is designed to provide food service for a peak load of 1,200 reservists over three shifts, plus offices, operations center, maintenance shops, meeting rooms and telecommunications space for both full-time personnel and reservist training meetings.

Use of precast concrete panels, free-standing concrete columns and metal panels provides low-maintenance finishes and economical construction and creates a building that is compatible with surrounding architecture. Clearstory windows introduce natural light and ventilation into the dining area in the center of the building.

Energy concerns were addressed through extensive computer modeling of building orientation, percentage of glazing, super insulation and the long-term economics of passive solar heating.

*Command/Design Agent: National Guard Bureau  
Base Engineering: 174th Civil Engineering Flight*



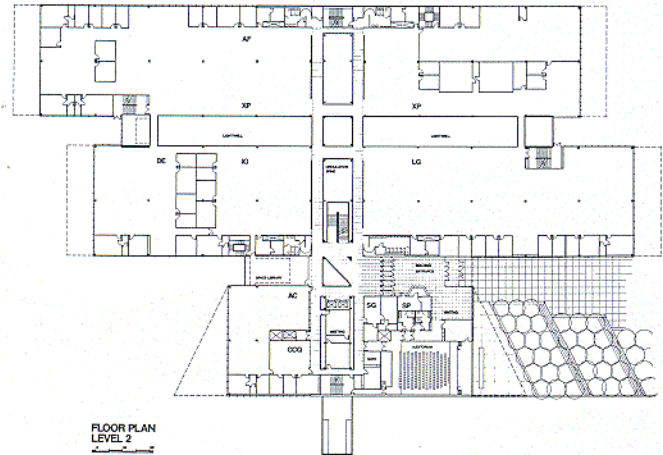
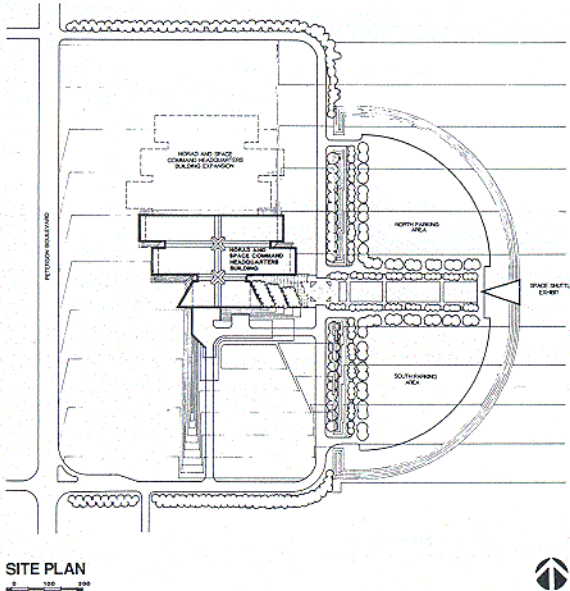


Concept Project

# Merit Award

**NORAD and Space Command Headquarters**  
**Peterson Air Force Base, Colorado**

Architects: Peckham Guyton Albers & Viets, Inc.



The design of the new headquarters building uses strong horizontal lines articulated by ribbed, stainless steel cladding and dramatic cantilevers to express the boldness and high-tech image of the Air Force's newest command. This image is further strengthened by the strong massing of this 250,200 square foot structure, by using finish materials dramatically different from the dark brown brick predominant on the base and by the isolated siting on an open plateau near the entrance to the base.

The building is a three-story structure, with the lowest level concealed by earth berms. Major orientation is east-west to take advantage of solar energy gains and dramatic views of the nearby mountains. Future expansion of 50-100 percent will be accommodated to the north without major disruption to operations.

A major, three-story lightwell topped with pyramid shaped

skylights serves as the major circulation spine between the 50,000 square foot office modules. Similar lightwells intersect the central spine and lead into the office modules. In addition to bringing natural light into the center of the office area, these lightwells provide visual relief and create a sense of place and orientation within the large open floor areas.

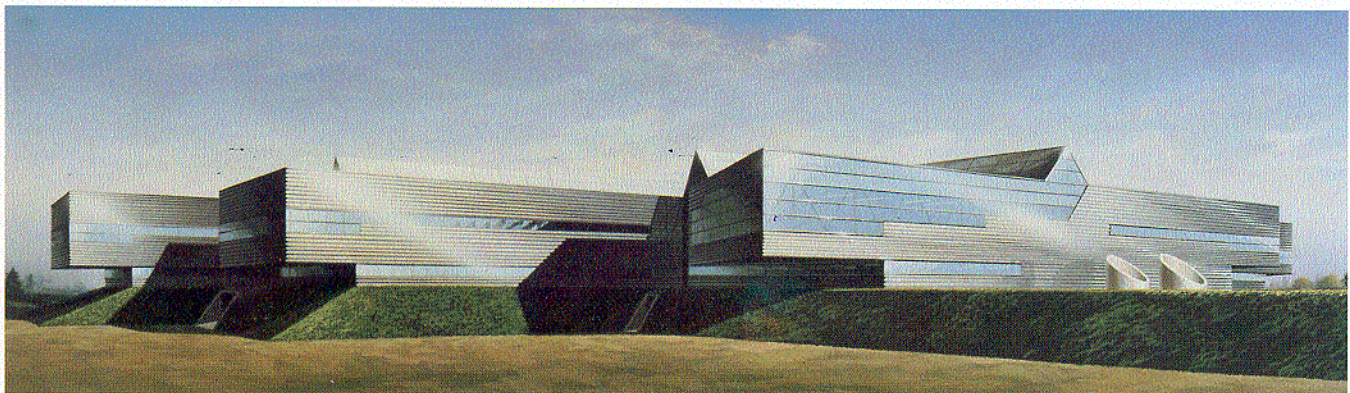
Numerous energy conservation measures are incorporated into the buildings siting, architectural design and mechanical systems design to significantly reduce the annual energy use.

*AFRCE: Central Region*

*Command: Space Command*

*Base Engineering: 1001st Civil Engineering Squadron*

*Design Agent: Corps of Engineers/Omaha District*

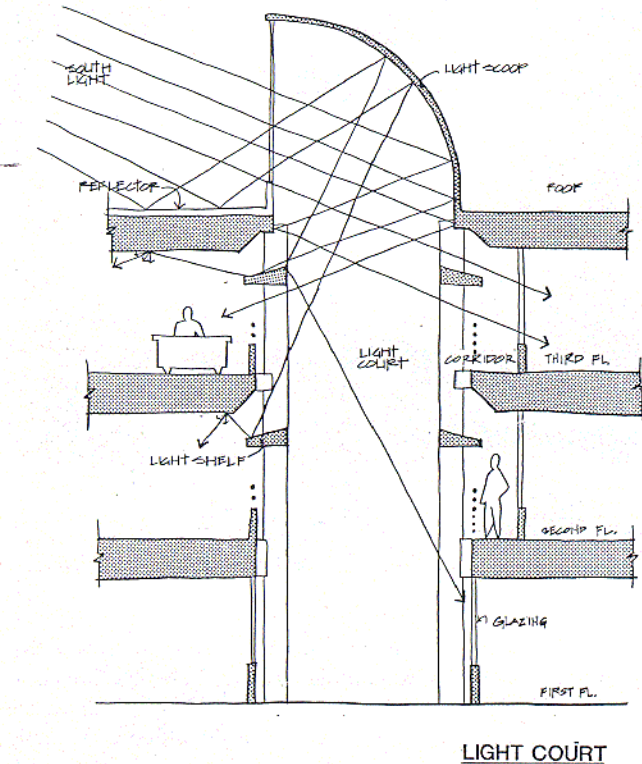




# Merit Award

Communications Command Headquarters  
Scott Air Force Base, Illinois

Architects: Fleming Corporation



The architectural program, size of the project and design solution for this headquarters building is remarkably similar to the building designed for Space Command. This three-story project is composed of three 20,000 square foot rectangles of open office space per floor separated by light courts. These light courts provide daylighting for the office space, act as pedestrian boulevards and provide selected views to the exterior.

Light scoops at the top of the light courts (see the section on the left) admit natural light into the building under controlled conditions. Varying amounts of solar heat and diffused and direct light are permitted to enter the light court during the fall, winter and spring. Solar gain during the summer is minimized. Full glazing separates the light courts from the adjacent office spaces. This separation permits the heating and cooling comfort levels of the light courts to be lower than for the offices and reduces energy costs.

The open office layout, in-floor distribution ducts for power and communication lines and use of systems furnishings will accommodate future changes.

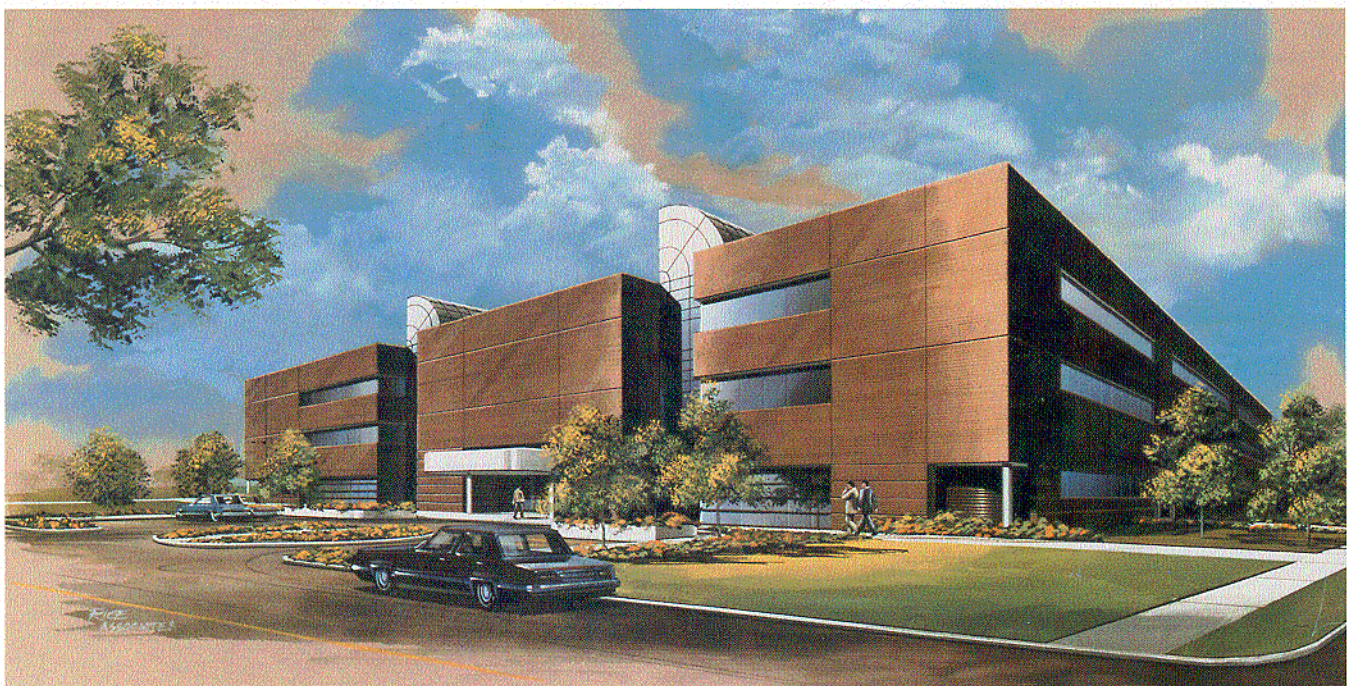
*AFRCE: Central Region*

*Host Command: Military Airlift Command*

*Using Command: Air Force Communications Command*

*Base Engineering: 375th Civil Engineering Squadron*

*Design Agent: Corps of Engineers/Louisville District*



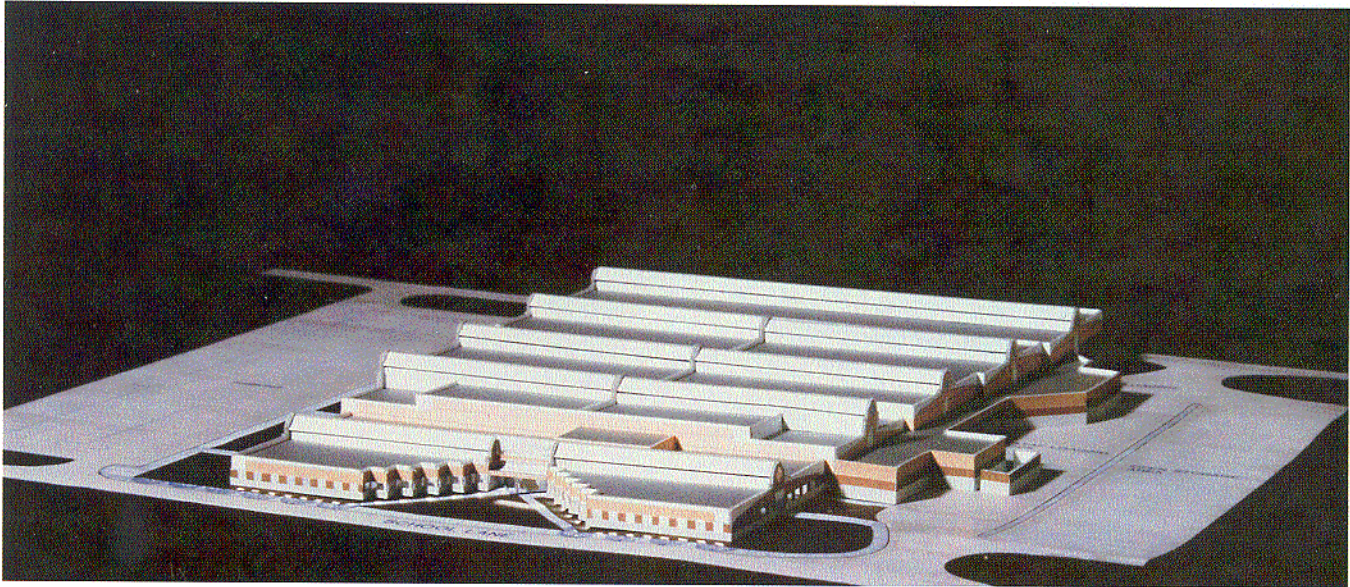


Concept Project

# Merit Award

Integrated Support Complex  
F. E. Warren Air Force Base, Wyoming

Architects: RNL, Inc.

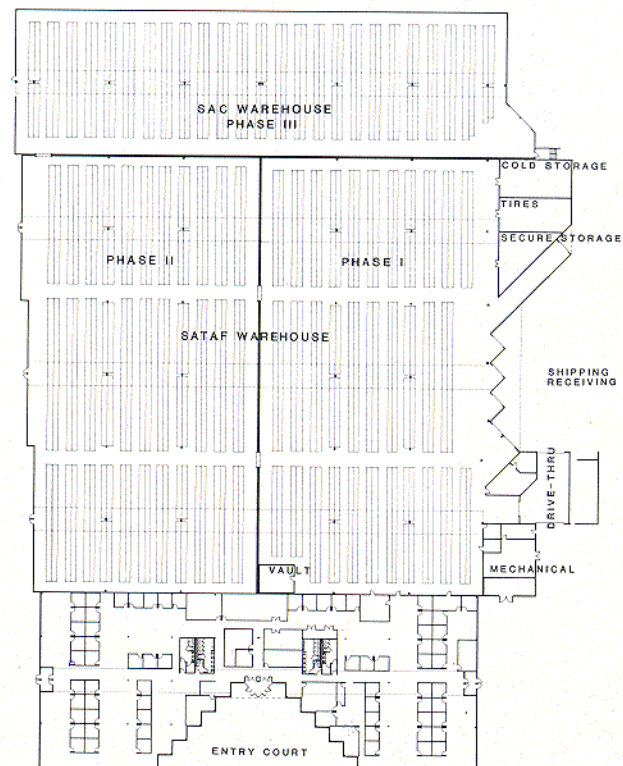


Many of the brick buildings on this Wyoming base were constructed in the 1880's to serve as barracks and stables for a U.S. Army supply post established to support the construction of the Union Pacific railroad. These buildings are listed as part of a historic district in the National Register of Historic Places. Many buildings have been restored and are used as dormitories, offices, warehouses and maintenance shops. One dormitory renovation project received an award in the 1983 USAF Design Awards Program.

This large office and warehouse complex is located near the historic district. To keep the scale of the building in context with its surroundings, the exterior walls are offset at 100 foot intervals. The exterior walls are layered with insulated panels that vary in tones to emulate the colors and shapes of the buildings in the historic district. Roof monitors add further similarities and serve two additional purposes - introducing daylighting into the interior and organizing the mechanical distribution within the warehouse areas.

Building orientation was determined by the intense chinook winds and the accompanying dust, heavy snow accumulation and intense sunshine.

A number of energy conservation measures were incorporated into the design to reduce the annual energy use to less than 50,000 BTU/SF for administration areas and 60,000 BTU/SF for the warehouses.

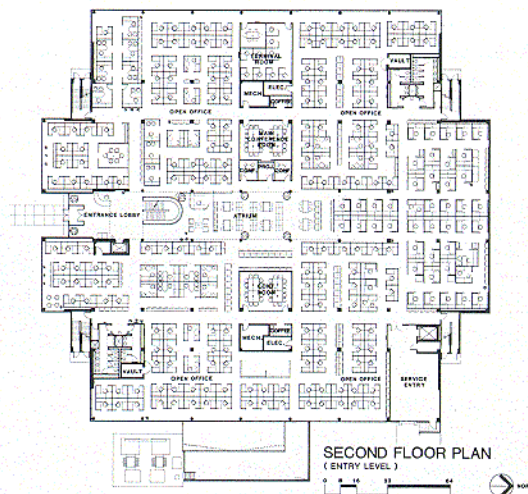
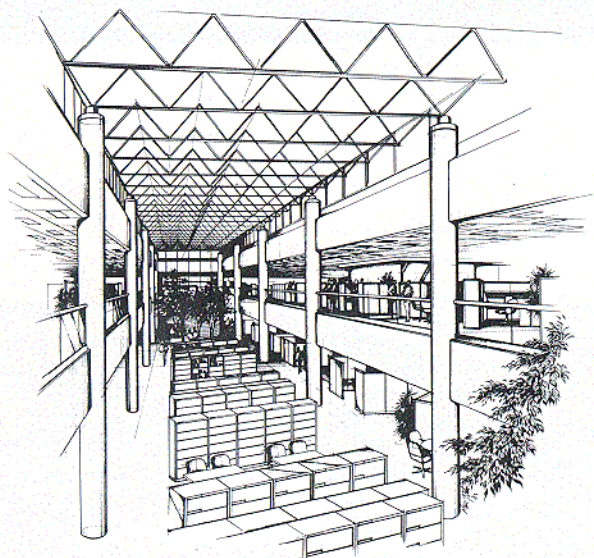
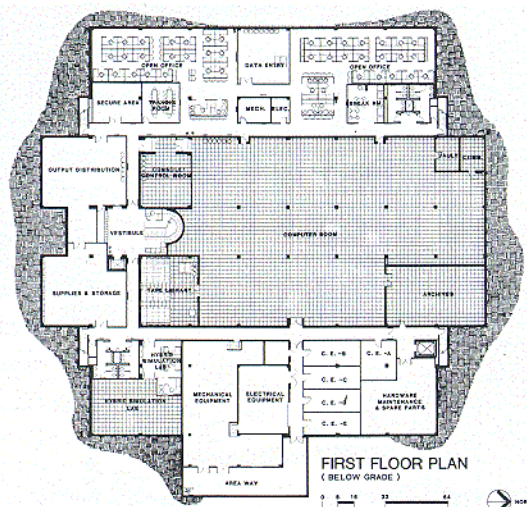


FLOOR PLAN

AFRCE: Ballistic Missile Support  
Command: Strategic Air Command  
Base Engineering: 90th Civil Engineering Squadron  
Design Agency: Corps of Engineers/Omaha District



## Architects: Cooper, Carry &amp; Associates, Inc.



The exterior walls consist of precast concrete panels and reflective green glazing. The panels have two finishes - a broken rib pattern and a light sandblasted finish - and have colored

*AFRCE: Eastern Region*  
*Command: Air Force Systems Command*  
*Base Engineering: Arnold Engineering Development Center*  
*Design Agent: Corps of Engineers/Mobile District*



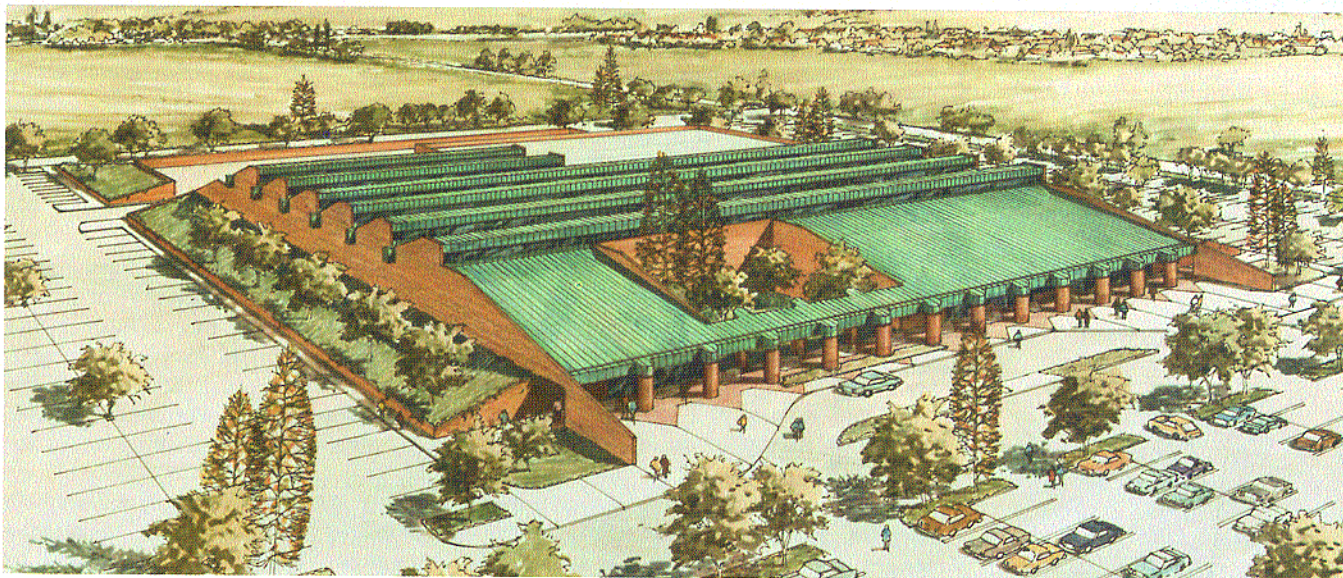
Concept Project

# Merit Award

Commissary

Vandenberg Air Force Base, California

Architects: Leidenfrost/Horowitz & Associates

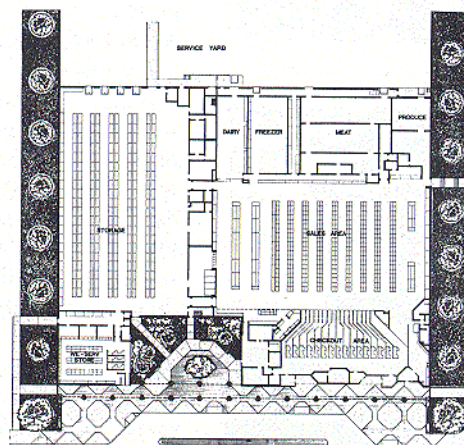


A series of sloped, continuous light monitors brings natural light into the building and creates a strong architectural statement and dramatic interior spaces. These monitors are covered with a standing seam, prefinished metal roof.

The main entrance to this 85,000 square foot commissary is oriented to the northeast to give the building good visibility, to buffer the entrance from the prevailing northwesterly winds and to allow for future development.

Bold colors and graphics highlight the interior and help to orient the customer to the various departments.

Energy conservation techniques are incorporated into the design of the building envelope and the mechanical systems. Heat rejection from the product refrigeration equipment for the display cases and walk-in coolers will be used for domestic water heating, space heating and dehumidification. In addition, return air will be drawn below the display cases to recover the cooling loss and to reduce air conditioning requirements.



FLOOR PLAN

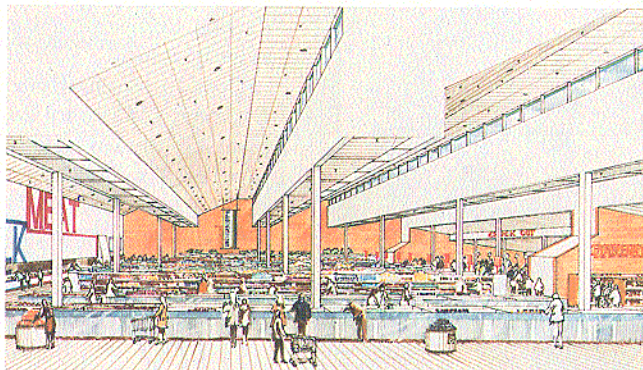


*AFRCE: Western Region*

*Command: Strategic Air Command*

*Base Engineering: 4392nd Civil Engineering Squadron*

*Design Agent: Air Force Commissary Service*







Ronald Gourley, FAIA, is Dean of the College of Architecture, University of Arizona, and has more than 35 years of experience in both architectural education and professional practice. He has been associated with the School of Architecture, Boston Architectural Center; Graduate School of Design, Harvard University; the School of Architecture and Planning, Massachusetts Institute of Technology; and has served as visiting professor of architecture at the Royal Academy of Arts, Copenhagen, Denmark.

Dean Gourley has been principal and partner in architectural firms in Cambridge, Massachusetts since 1951, and has received numerous design awards. He was elected to the College of Fellows of the American Institute of Architects in 1976 for his contributions in design and education.

He received his Bachelor of Architecture from the University of Minnesota and his Masters of Architecture from Harvard University. He is a registered architect and has served on numerous design award juries.



Robert J. von Dohlen is Chairman of the Board and past President of the Farmington, Connecticut firm of Russell, Gibson, von Dohlen, Inc., Architects. He joined the firm in 1956 and, together with his project responsibilities, is credited with refining internal business and financial management techniques and expanding the firm's reputation for design commitment.

Mr. von Dohlen has served as principal-in-charge on such projects as the \$50 million Farm Springs Office Park in Farmington, Scovill World Headquarters in Waterburg and the renovation of St. Joseph Academy in West Hartford into a conference/training facility for Hartford Insurance Group.

He received both his Bachelor of Architecture and Master of Regional Planning degrees from Cornell University and is a registered architect. He was elected to the College of Fellows of the American Institute of Architects in 1983 and is currently the Vice-President of the AIA.

Mr. von Dohlen chaired the Governor-appointed State Committee—New Uses for Old Building, has been President and continues to be a member of the Board of Directors of the Hartford Symphony, and chairs the Board of Building Review for the City of Hartford.



Carlos C. Villarreal is Senior Vice President and a member of the Board of Directors of Wilbur Smith and Associates. The firm is a major international consulting engineering, architectural, planning and economics firm.

Mr. Villarreal has received two Presidential appointments. He was confirmed as Administrator of Urban Mass Transportation in the Department of Transportation in March 1969 and served in that post until January 1973. He was appointed Commissioner and served also as Vice Chairman of the Postal Rate Commission from 1973 until 1979.

He is currently serving on Secretary of Commerce Baldrige and Ambassador Brock's Industry Sector Advisor Committee, and Secretary of Transportation Dole's Section 15 Advisory Committee on Urban Transportation.

Mr. Villarreal graduated from the Naval Academy in 1948 and served on active duty for eight years. He is a registered engineer and represented the Society of American Military Engineers on the jury.



Thomas C. Hunter, Jr. is manager of Maryland and Virginia operations for Law Engineering Testing Company, a consulting civil engineering firm specializing in soil exploration and material testing.

Prior to retiring from the U.S. Army as a colonel in 1977, Mr. Hunter served as District Engineer, U.S. Army Engineer District, and was responsible for 600 personnel performing planning, design and construction for projects in eight northeastern states. Annual expenditures, including design and construction contracts, exceeded \$90 million.

Mr. Hunter has a Bachelor of Science degree in civil engineering from Virginia Polytechnical Institute and a Master of Engineering degree from Texas A & M University. He is a registered engineer in Virginia, Maryland and Delaware.

## Jury



P R E S I D E N T I A L  
*Design  
Awards*  
1 9 8 4

The Presidential Design Awards Program is the first government-wide effort to recognize and foster excellence in Federal design efforts. The program recognizes exemplary achievements in the fields of architecture, engineering design, graphics design, interior design, landscape architecture, product/industrial design, and urban design and planning.

The 1984 awards represent the first Federal design efforts to be recognized in this program, which was established in December 1983. The three Air Force projects and programs listed below were among the 91 Federal projects receiving Federal Design Achievement Awards. Thirteen of these 91 Designs were then honored with the Presidential Award for Design Excellence.

**Total Energy Plant  
Wilford Hall Medical Center  
Lackland Air Force Base, Texas**

**Library Expansion  
Air Force Academy, Colorado**

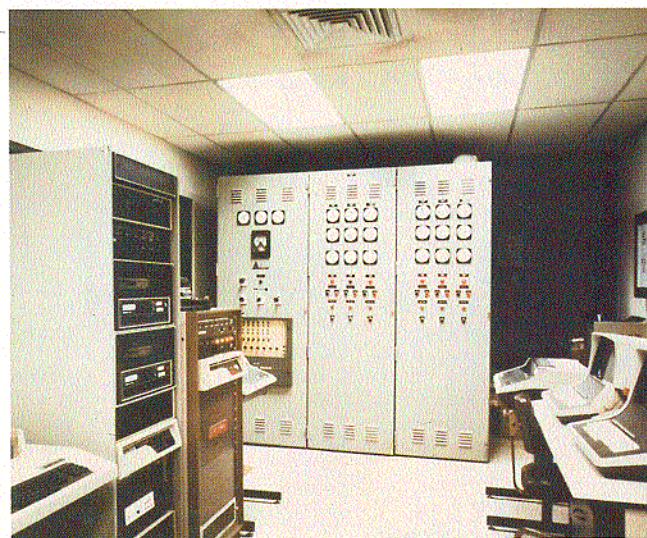
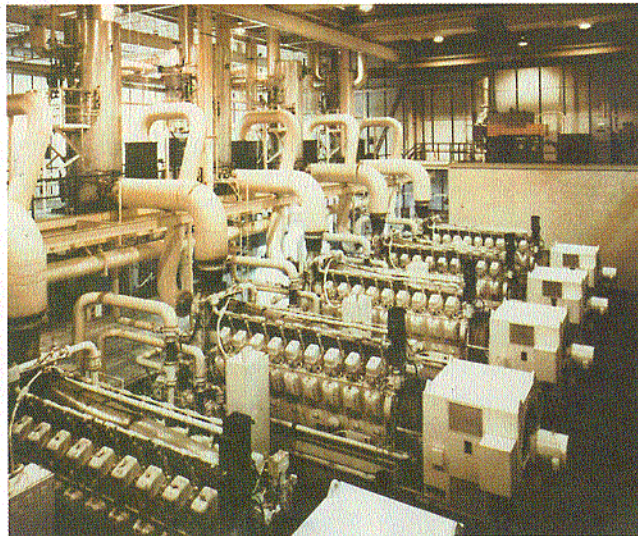
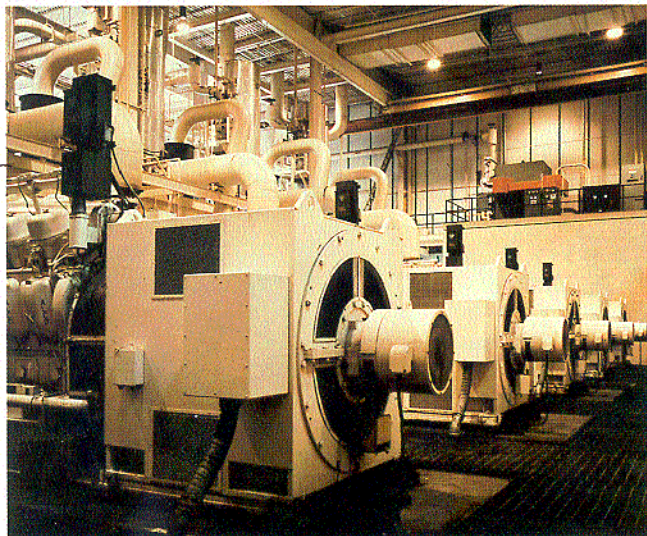
**U.S. Air Force Sign Standards**



# 1984 Presidential Design Awards Program

**Total Energy Plant**  
**Wilford Hall Medical Center, Texas**

Architects: Benham Blair & Affiliates/Page Southerland Page



Concurrent with the renovation and expansion of the largest medical facility of the U.S. Air Force, this facility was designed both to be integrated with an existing steam and emergency electrical power plant and to supply all energy needs to the expanded hospital. Construction was completed with no major interruption of hospital operations.

The structure consists of precast concrete double-tee walls on a cast-in-place concrete base and with a deep stucco-finished fascia. The buff colors are compatible with the new additions to the hospital. Exterior transformers and water treatment equipment are located out of sight of hospital occupants.

The entire work area floor is a grating. A unique ventilation system blows air cooled by evaporation upward through the grating and between engine generators. Roof-mounted silencers above the heat recovery boilers muffle engine exhaust noise.

A computerized energy management system provides remote start-stop, set-point adjustment, alarm monitoring, automatic status reporting, energy consumption data and limited optimizing capability. The design emphasizes reduction in consumption of fossil fuels by appropriate sizing of various items based on time/load demand, by using various heat recovery systems, by using absorption units to change heat into chilled water and by cascading heating and cooling flows as demands fluctuate. Heat recovery permits the plant to operate as an integrated energy system.

*AFRCE: Central Region*

*Host Command: Air Training Command*

*Using Command: Air Force Systems Command*

*Design Agent: Corps of Engineers/Fort Worth District*



# 1984 Presidential Design Awards Program

## Library Expansion Air Force Academy, Colorado

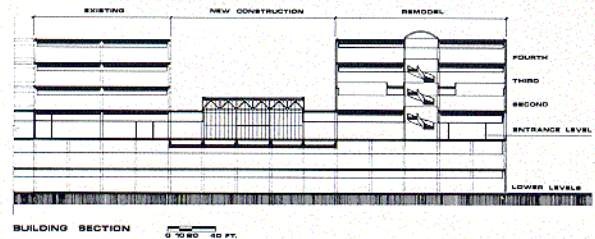
Architects: Henningson, Durham & Richardson, Inc.



The expansion and major renovation of the Air Force Academy library was needed to increase the capacity, to accommodate state-of-the-art library technology and to serve as the main entry to the existing library. The project presented several unique design problems. The existing library is part of a megastructure that is historically and architecturally significant. The design had to be compatible with the massing, proportions and materials of the original structure and had to maintain an important east-west vista of the nearby mountains.

After consultation with the original architect for the complex, three basic design principles were established. First, the addition must be treated as an "additive element" rather than a matching extension of the existing building. Secondly, visibility through the addition along the east-west axis must be maintained. Finally, the addition must incorporate strong geometric forms consistent with the architectural vocabulary of the existing building.

The completed addition has successfully met these goals. The entire east and west walls are clad in glass and the roof structure of exposed, steel trusses appears to float on a high colonnade of aluminum-clad columns. Clearstory windows line the north and south sides of the main reading room. This extensive use of glass and the high ceiling height permit great visibility through the building and help to create a "pavilion" appearance. Careful selection and detailing of materials further compliment the design and create an elegant addition that dares to be different.



AFRCE: Central Region  
Command: Air Force Academy  
Base Engineering: 7625th Civil Engineering Squadron  
Design Agent: Corps of Engineers/Omaha District

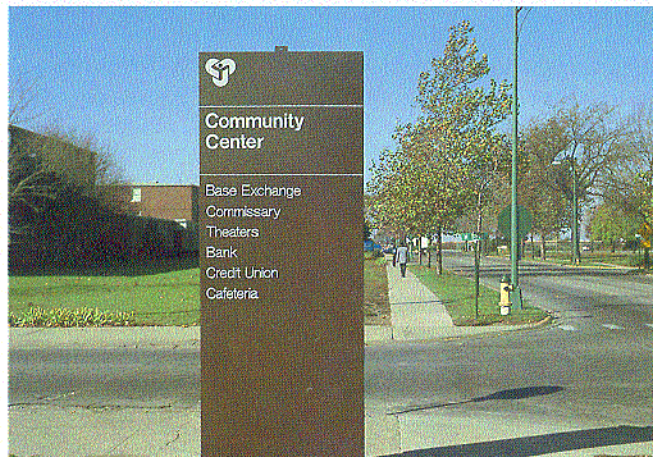
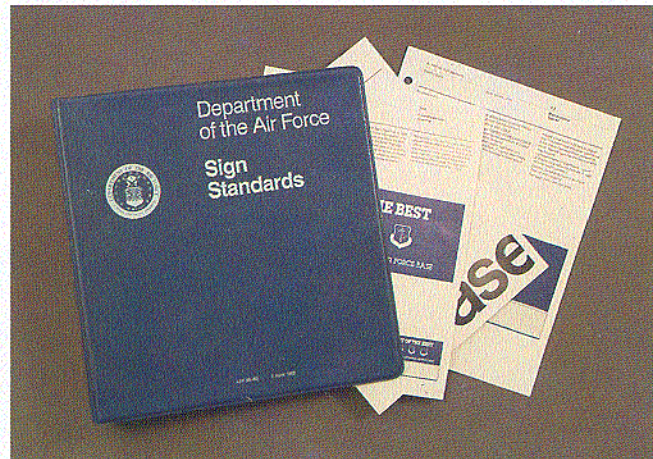


Federal Design Achievement Award

# 1984 Presidential Design Awards Program

Air Force Pamphlet 88-40, Sign Standards  
United States Air Force Sign Program

Designer: Herman and Lees Associates







AFP 88-40, Sign Standards

2-40

Exterior Signs

Direction

Destination Sign  
Type D1  
Sign Grid a

This publication provides the basic standards for the design, fabrication and placement of most exterior and interior signs needed on an Air Force installation. The standards were developed to better inform people about the base and assist them in finding their destinations, save time and money by installing more durable signs, improve the base appearance by eliminating visual clutter of many different signs, and establish a more professional image for the Air Force.

The standards establish acceptable typefaces, letter sizes, sign panel layouts and sizes, colors, materials, sign placement, and fabrication details and specifications. Helvetica Medium was selected as the primary typeface, using white letters on standard blue or brown backgrounds. Sign panel sizes are based on the function of the sign.

Although the guidance limits the amount and content of the information displayed on the signs, the richness of the military heritage is retained. Variations in sign sizes reflecting organizational hierarchy, use of traditional heraldic shields and use of unit morale signs are used to emphasize this heritage.

Free-standing signs are generally recommended for exterior use, but additional guidance is provided for wall-mounted signs. The pamphlet includes sign guidance for historic buildings, using a different typeface and different panel layouts.

Air Force Pamphlet 88-40 also has been featured as a casebook study in the 1984/85 edition of Print Magazine's, *The Best in Environmental Graphics*.

OPR: Directorate of Engineering and Services  
Project Manager: AF/LEES (Mr. James Enloe)

AFP 88-40, Sign Standards

1-1

Graphics

Typography

Helvetica Medium  
Tile System

Helvetica medium and helvetica regular are the principal approved typefaces to be used on Air Force signs.

Helvetica medium is used for major information on all signs, as shown throughout this pamphlet. Helvetica regular is used for secondary information on identification signs and for certain regulatory signs.

Use of alternative typefaces may be approved in special situations such as:

- signs for historic buildings or bases with unique architectural character like Randolph Air Force Base. See Appendix D for guidance on use of alternative typefaces.
- The tile system for helvetica medium is illustrated on this page. Any tile systems that are purchased for use on Air Force signs should be compared to the illustrations on this page to assure conformity with standards both in terms of letterform design and letter spacing.

A tile system assures proper letter spacing. Some letter manufacturers supply letters on paperboard tiles which are proportionately sized. These tiles are notched to ensure proper vertical matching and, when used with the gridlines drawn on the sign face, to sign the words. See page 1-6, Sign Assembly Sequence.



Director of Engineering and Services: Major General Clifton D. Wright  
Deputy Director: Brigadier General George E. Ellis  
Chief, Engineering Division: Colonel Jarrell S. Mitchell  
Chief, Architecture and Engineering Branch: Mr. William A. Brown, Sr.  
Editor: Mr. James P. Enloe