

United States Air Force

# Design Awards Program



1983 Annual Report





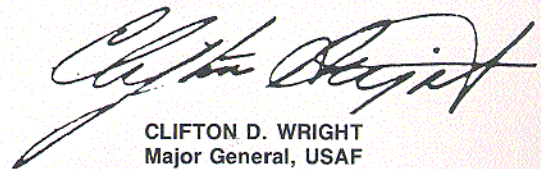
## From the Director

Nine years ago, the Directorate of Engineering and Services initiated a major program focused on improving the working and living environments for our Air Force family. As part of this effort, the Design Awards Program was established to recognize outstanding facility design and to promote design excellence.

We have made great progress during the past nine years because many people in the Engineering and Services community shared our goals and worked very hard. Our work is not finished. We must continue to clearly identify facility requirements and to program, design and construct buildings that support the Air Force aerospace mission. We must create buildings that are attractive, functional, flexible, energy efficient, compatible with the surrounding environment and economical to build, operate and maintain.

Beginning with this report on the 1983 design award winners, we will annually publish a report recognizing those projects selected as representing excellence in architecture, engineering, landscape design and interior design.

I am extremely proud of our past achievements and challenge all of us to continue to pursue excellence.

  
CLIFTON D. WRIGHT  
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. Moreover, all projects

are given equal consideration, whether designed by base civil engineering personnel, the design agent or an A-E firm.

Since the USAF Design Awards Program was initiated in 1976, more than 80 individual projects have received awards. In addition, two awards have been given to bases in recognition of the quality of the overall design program and base appearance. A number of Air Force projects recently have received state and national AIA awards and recognition in the professional architectural journals—reflecting the awareness that Air Force design is both functional *and* attractive.

## 1983 USAF Design Award Program Award Winning Projects

### Completed Projects:

#### First Honor Awards

Dormitory  
Loring Air Force Base, Maine

Commissary  
Los Angeles Air Force Station, California

Architectural Compatibility Program  
Langley Air Force Base, Virginia

#### Merit Awards

Hangar  
Offutt Air Force Base, Nebraska

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

Dormitory Alteration  
Kelly Air Force Base, Texas

Filling Station and Branch Exchange  
Eglin Air Force Base, Florida

Library Expansion  
Air Force Academy, Colorado

### Concept Projects:

#### First Honor Award

Chapel Center  
Lackland Air Force Base, Texas

#### Merit Awards

Fire Station  
McGhee-Tyson Airport  
Knoxville, Tennessee

Medical Training and Dining Facility  
Nashville Metro Airport, Tennessee

Dining Hall  
Andrews Air Force Base, Maryland

#### Citation Awards

Lodging Facility  
Bolling Air Force Base, Washington, DC

Dormitory Conversion  
F.E. Warren Air Force Base, Wyoming

Lodging Facility  
Hanscom Air Force Base, Massachusetts

Visiting Officers Quarters  
Vandenberg Air Force Base, California



Completed Project

# First Honor Award

## Dormitory

Loring Air Force Base, Maine

Designer: Ellenzweig, Moore and Associates, Inc.

A desirable residential environment has been created for 450 unaccompanied enlisted personnel in this handsome and energy-efficient building that is harmonious with its wooded site.

The three-story dormitory is organized with a number of two-person bedrooms clustered around a common lounge and entrance. Each bedroom shares a bathroom with one other bedroom. Each cluster houses approximately 72 people and a central corridor strings the clusters together.

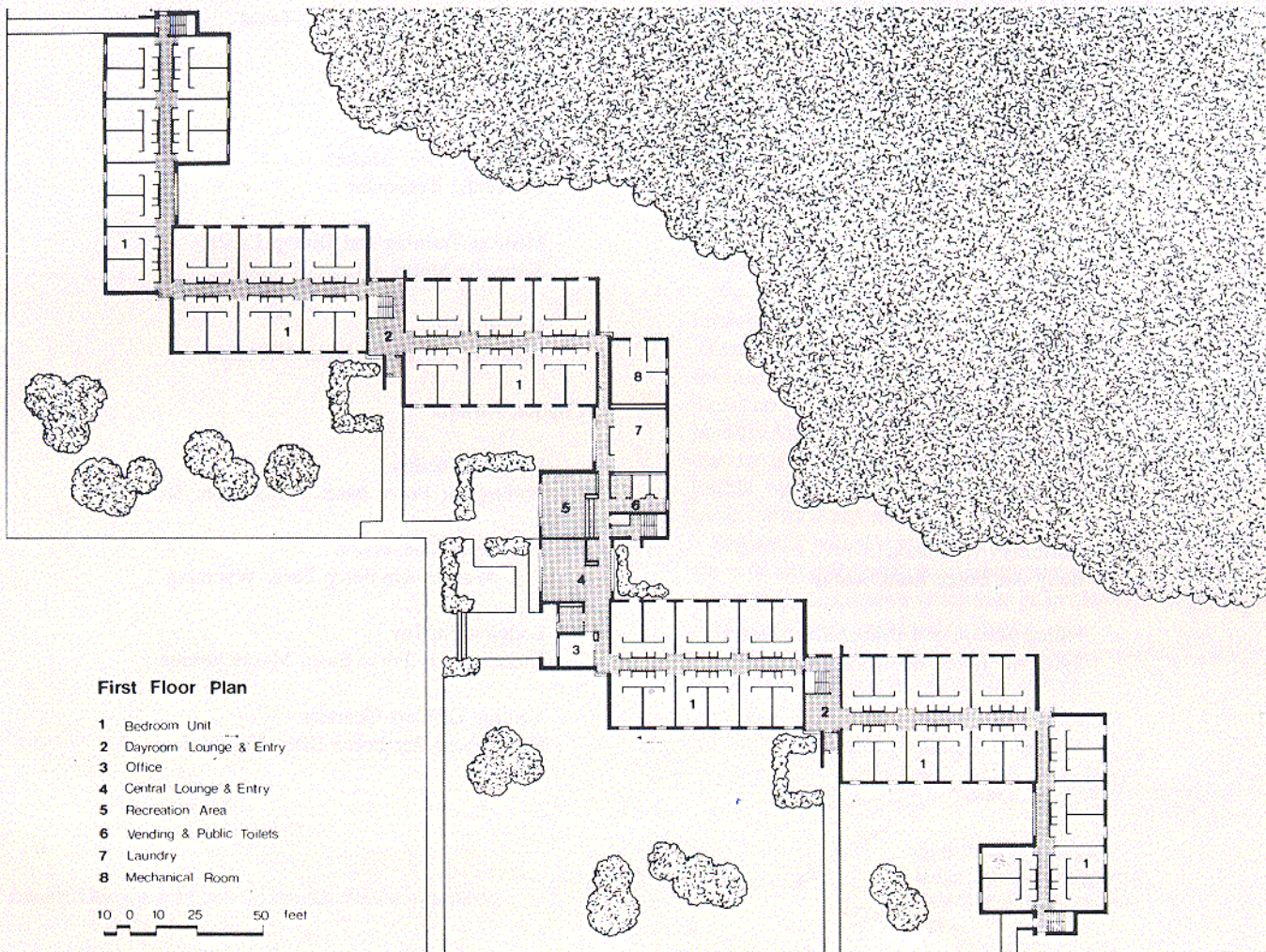
The building is sited to provide maximum open areas, to protect the entries from the winter winds and to allow maximum exposure to sunlight. Entrances, parking lots and access roads are sited south and east of the building to allow maximum sun exposure to melt snow and ice on the pavements during the winter. Woodlands on the north and west sides of the building have been preserved to buffer winter winds. New landscaping

and deciduous trees will be planted to provide summer shading.

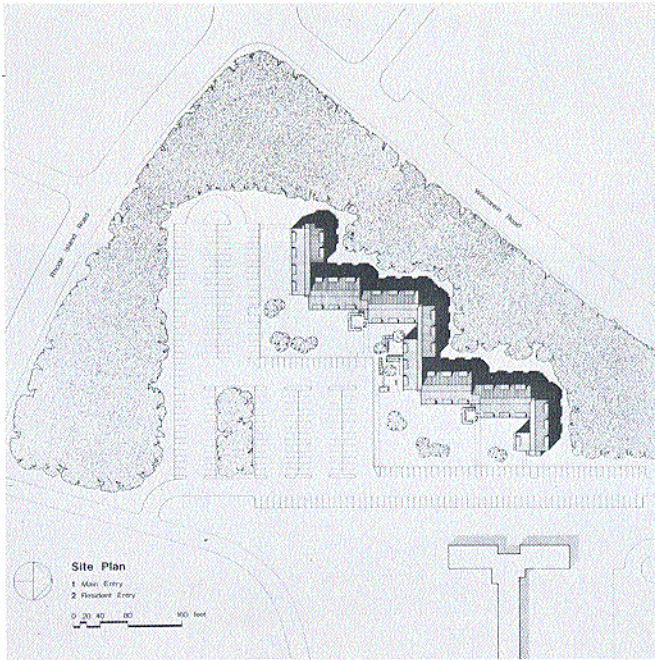
The bedrooms have minimal glazing and are oriented to the east and west to provide maximum daylight. The first floor common lounges have outside terraces for use during warm weather—one terrace faces the woods to the north and the other faces south to offer exposure to the sunshine.

The combination of the steeply sloped roofs and low eavelines on the third floor reduces the building mass, provides more of a residential scale to the building and creates interesting spaces in the third floor rooms.

The roofs and exterior walls are heavily insulated and all windows are triple glazed. The exterior walls and roofs are furnished in earth-tone colors to achieve greater solar gains during the winter.







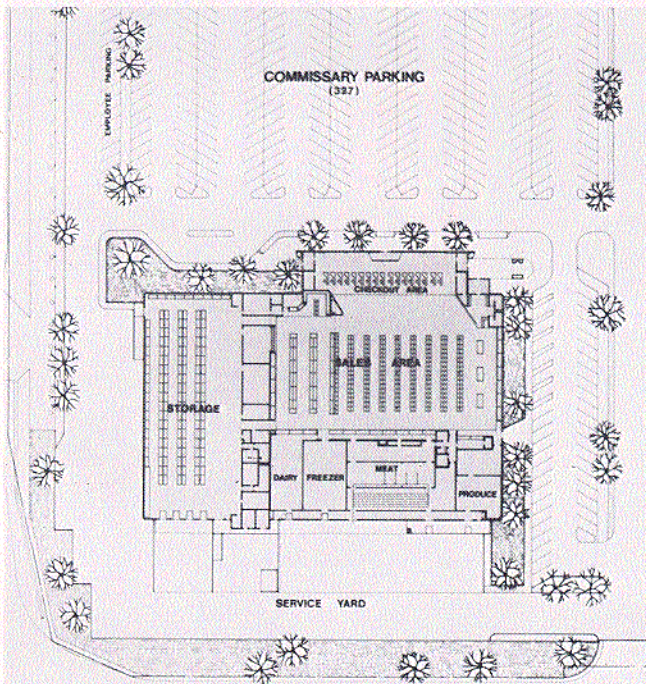


Completed Project

# First Honor Award

Commissary  
Los Angeles Air Force Station, California

Designer: Leidenfrost/Horowitz Associates



Los Angeles Air Force Station is located in a highly urban area and is surrounded by many major high tech aerospace companies. The commissary was designed both to be compatible with the contemporary aerospace buildings and to establish an architectural style for future development on the base.

Tilt-up concrete slabs and aluminum panels enclose most of the building. Landscaped earth berms cover the concrete slabs, providing insulation against the hot sun and maximizing landscaping in an otherwise completely paved area. The aluminum wall panels are finished in a white matt finish to provide a true flat appearance and subdivided to de-emphasize the wall height. Glazing is limited to the north elevation to minimize heat gain.

A five-foot high frieze of brilliant colors and supergraphics bands the entire sales area to minimize the high ceilings, provides decorative interest and helps customers locate items. Boldly colored space frames are used inside and out to assist in visually lowering the ceiling height while providing an airy, colorful counterpoint to the flat surfaces of the exterior aluminum panels.







Completed Project

# First Honor Award

Architectural Compatibility Program  
Langley Air Force Base, Virginia

Designer: 1st Civil Engineering Squadron



Most Air Force bases have been constructed over the past 40 years in a piecemeal fashion—sometimes without the benefit of long range planning or base master plans, responding to immediate needs and subject to changes in architectural style. The result often has been an unattractive, mismatched collection of buildings which are dissimilar in architectural style, scale, materials and colors.

With the increased emphasis by the Air Force on design excellence and the improvement of the base environment, many commands are developing base architectural compatibility programs. These programs establish long-range planning goals and design standards encompassing architectural style, material and color selections, signage, street furniture and landscaping.

Tactical Air Command was one of the first commands to require its bases to develop architectural compatibility guidelines and was directly involved in the development of guidelines for Langley Air Force Base.

A limited color palette was selected based on the predominant color tones of the older facilities. Emphasis was placed on careful and thoughtful maintenance of existing buildings. Roof and window repairs and replacements, painting and other design elements were coordinated. Similar design guidelines were established for new construction.

The results of this effort are clearly visible in the marked improvement of the overall base appearance. The diverse architecture is more compatible and unified by use of color and the design of new projects is more sympathetic to the surrounding environment.





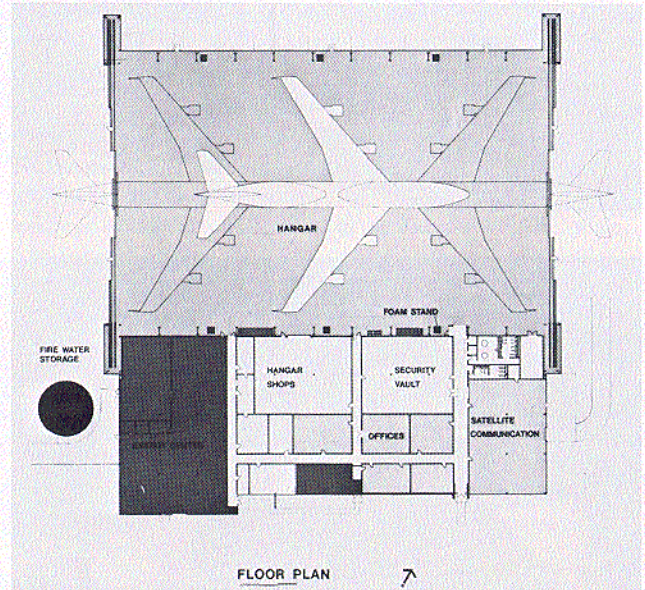
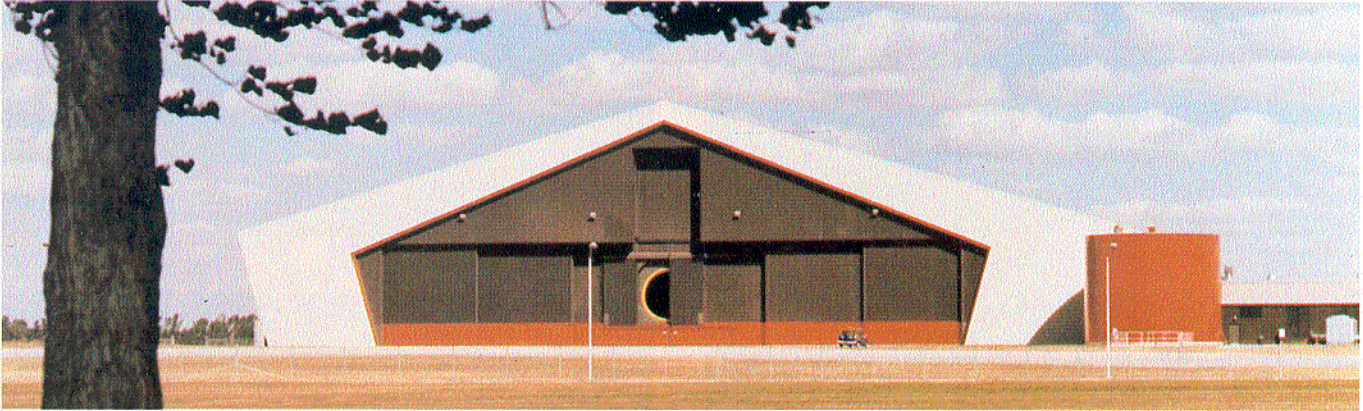


Completed Project

# Merit Award

Hangar  
Offutt Air Force Base, Nebraska

Designer: Burns & McDonnell



This 90,000 square foot hangar was designed to service and shelter the new E-4B aircraft—the highly sophisticated military version of the Boeing 747B jet transport modified for use as an advanced airborne command post during a national emergency.

The hangar can be used to service two aircraft in a nose-to-nose configuration with the tail assemblies exposed outside through fitted openings in the hangar doors or as a pull-through hangar where a single plane may be totally sheltered. The building includes maintenance shops and administrative areas. Back-up systems, emergency generators and other fail-safe devices have been provided to ensure airborne capability at all times. The bold treatment of surfaces and colors was used to give a lower profile to this 86 foot high building and to avoid the massive, industrial appearance normal to hangar facilities.



Completed Project

# Merit Award

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

**Designer: Benham Blair & Affiliates/ Page Southern Page**

Concurrent with the renovation and expansion of the largest medical facility of the US 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 of the expanded hospital. Construction was completed with no major interruption of hospital operations.

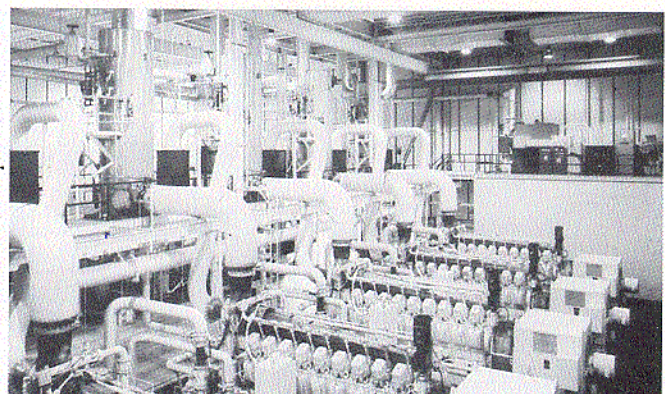
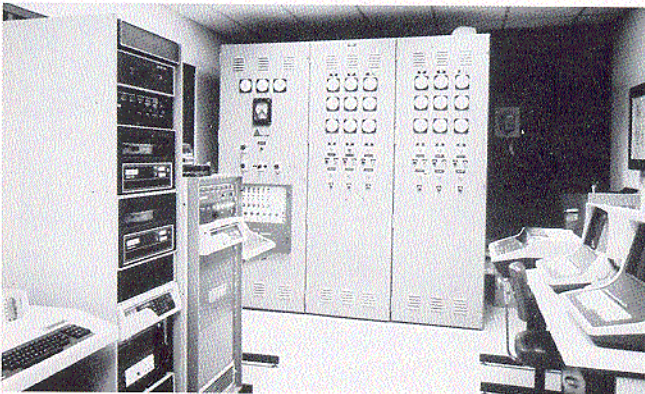
The structure consists of precast concrete double-tee walls on a cast-in-place concrete base and with a deep stucco finished fascia. The buff colors are compatible with the new additions to the hospital. Exterior transformers and water treatment equipment are sited out of sight of hospital occupants.

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.

Fuel consumption is less than one-half that of a conventional heat plant.





Completed Project

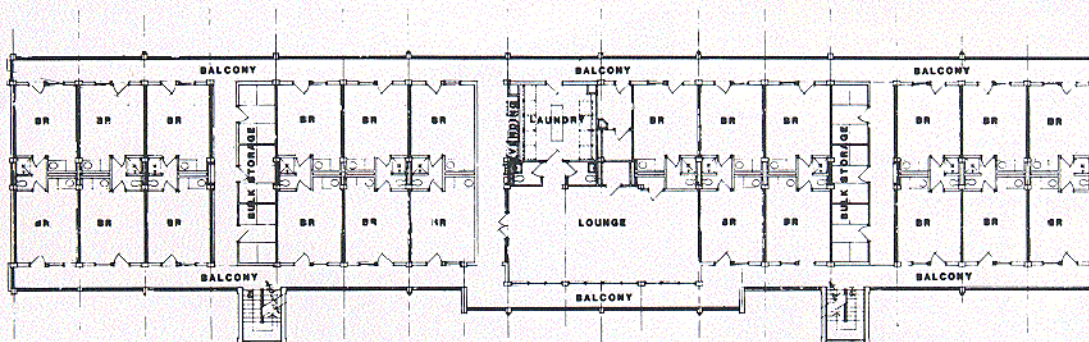
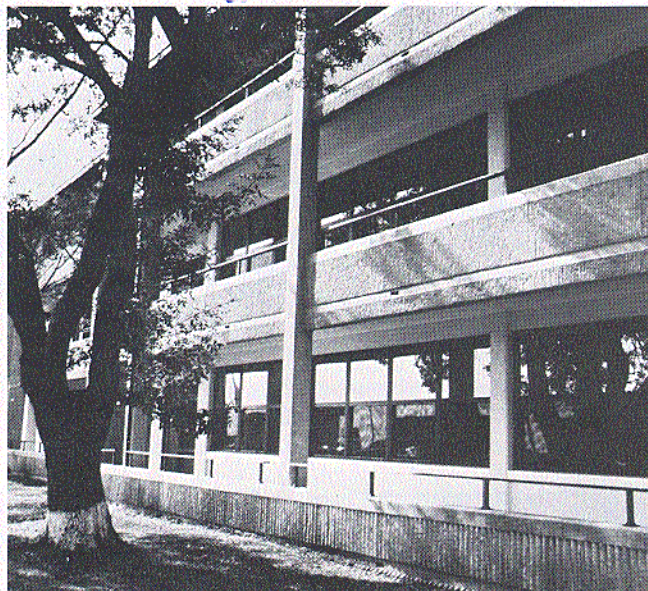
# Merit Award

Dormitory Alteration  
Kelly Air Force Base, Texas

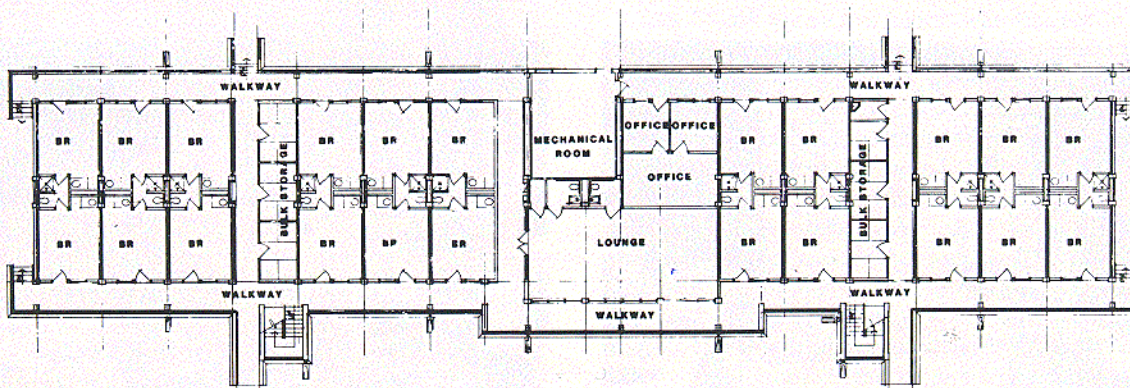
Designer: Richard Armstrong, Architect, Inc.

The alteration and renovation of these three-story dormitories reflect the Air Force commitment to improve the environment of the enlisted personnel. The original central corridors and gang toilets and showers were eliminated; separate bathrooms were added to provide a shared bathroom for every two bedrooms. Each bedroom is designed for two people and has a lavatory, undercounter refrigerator and built-in wardrobes. The central ducted forced-air HVAC system was replaced by individual room-controlled fan coil units.

The access balconies were widened, using cast-in-place, ribbed concrete beams. New stair towers were added to improve circulation, break up the mass of the buildings and provide architectural interest.



**SECOND FLOOR PLAN**  
THIRD FLOOR PLAN SIMILAR



**FIRST FLOOR PLAN**



Completed Project

# Merit Award

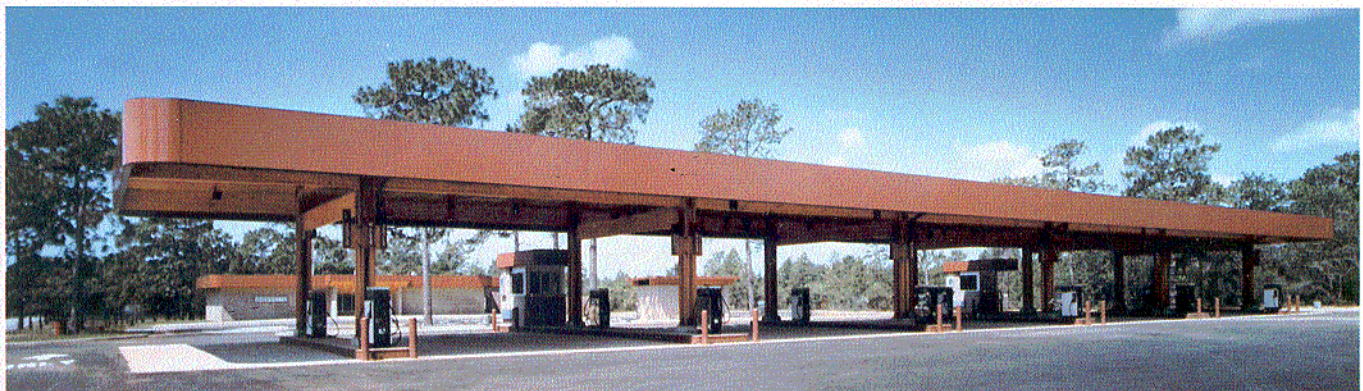
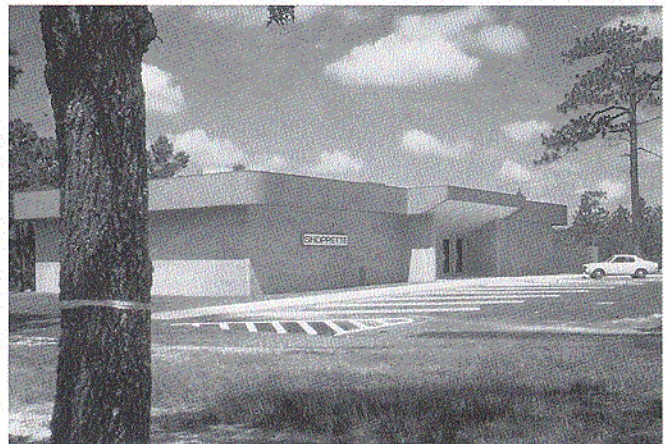
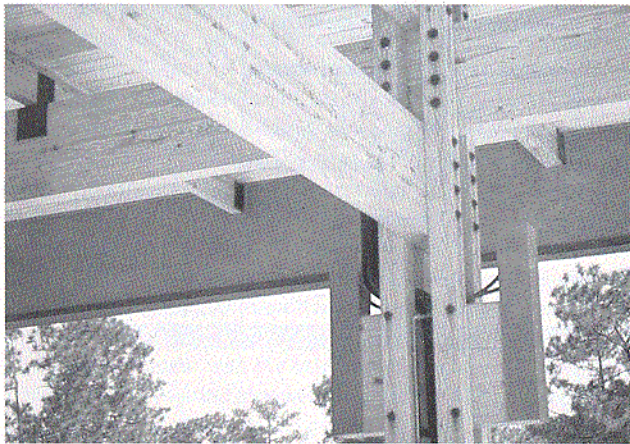
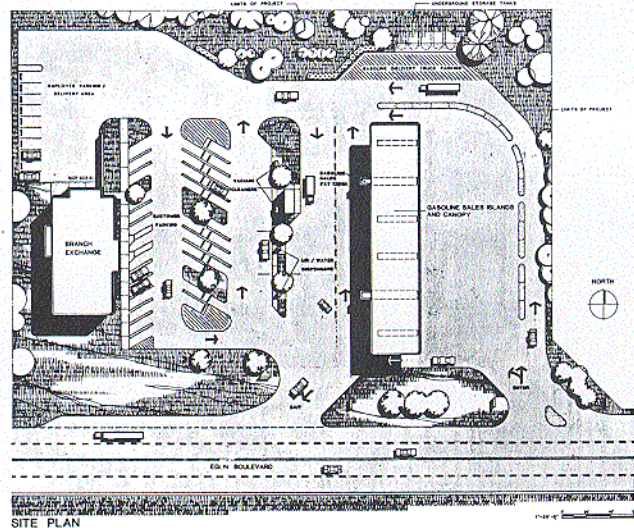
Filling Station and Branch Exchange  
Eglin Air Force Base, Florida

Designer: The Bullock Associates, Architects/Planners, Inc.

This new complex is located beside the primary east-west road through the base and provides the one-stop convenience of a multi-lane gas station and a new 4,200 square foot convenience store.

The handsome use of exposed glue-laminated timber structure for the gas station was based as much on its functional characteristics as for aesthetics. As the facility is sited only three-quarters of a mile from Choctawhatche Bay, an arm of the Gulf of Mexico, the salt-laden moist environment ruled out steel and concrete was too expensive. The fascias of both buildings are finished in russet-colored, prefinished aluminum, which links the buildings together and harmonizes with the other earth-tone materials and the surrounding environment.

Many large mature pine trees on the site were preserved by the careful siting. Landscaping was limited to grassing large open areas surrounding the site to minimize maintenance.



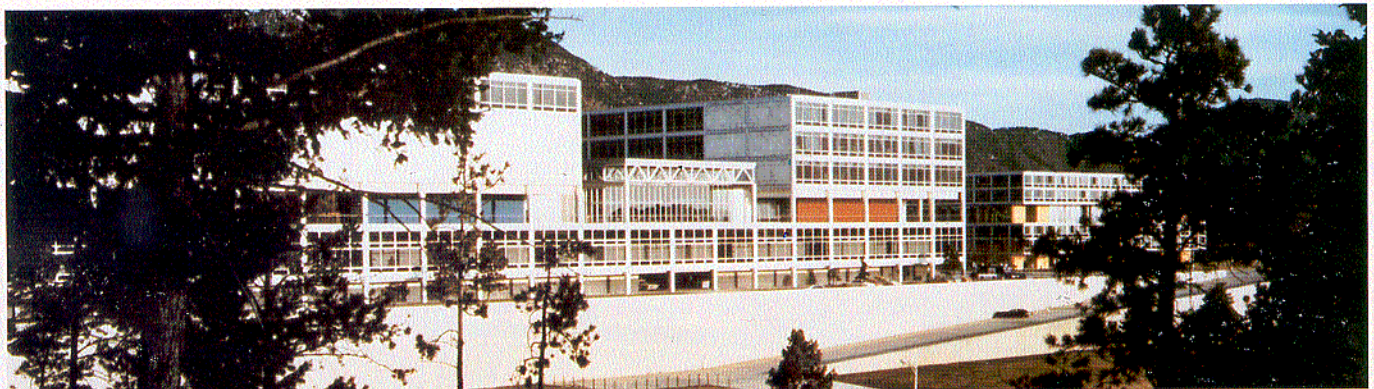
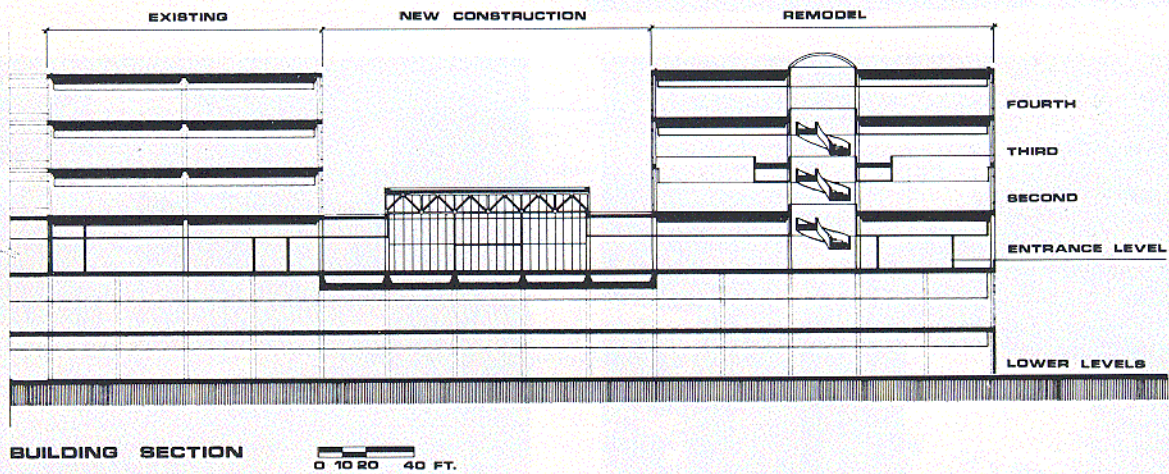
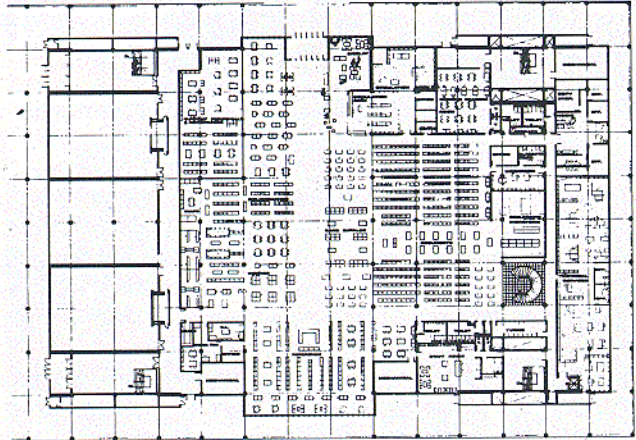
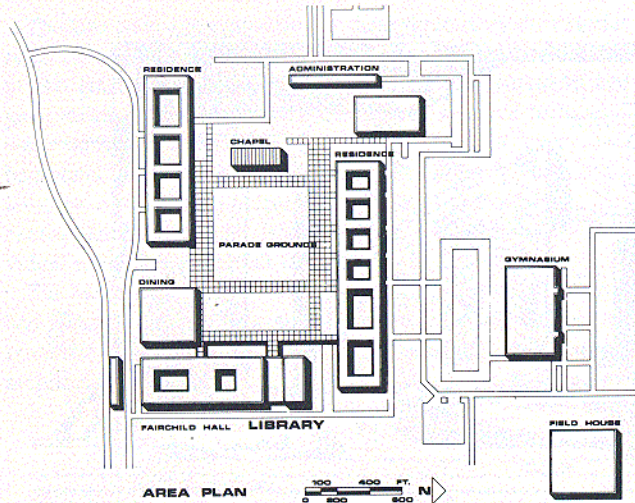


Completed Project

# Merit Award

Library Expansion  
Air Force Academy, Colorado

Designer: Henningson, Durham & Richardson, Inc.







The expansion and major renovation of the Air Force Academy library to increase the capacity, to accommodate state-of-the-art library technology and to serve as the main entry to the existing library presented several unique design problems. The existing library is one element in a megastructure that is historically and architecturally significant. The addition had to be compatible with the original structure in terms of massing, proportions and materials. The most appropriate site for the addition was on a third-level plaza separating the library and classroom portions of the megastructure. Although the original landscaping had been removed several years ago and the plaza was roped off to prohibit pedestrian traffic, it was still highly desirable to maintain an important east-west vista to the nearby mountains.

After consultation with the original architect for the complex, three basic design principles were established. First, the addition would 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 would be maintained. Finally, the addition would 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, light steel trusses appear 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 while still being compatible.



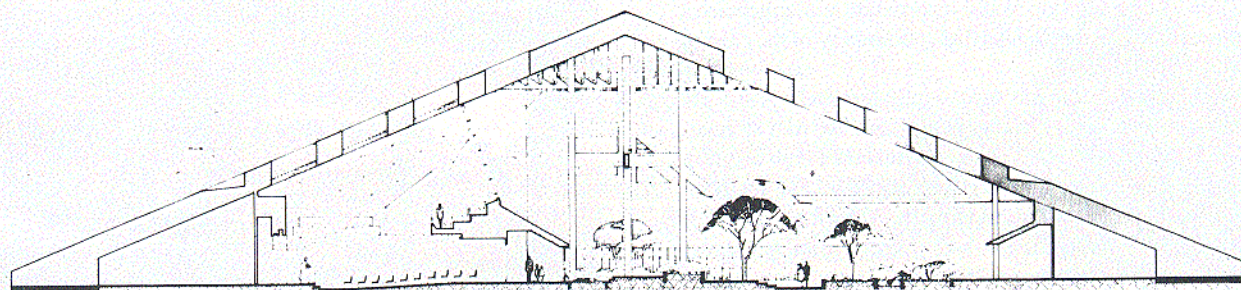
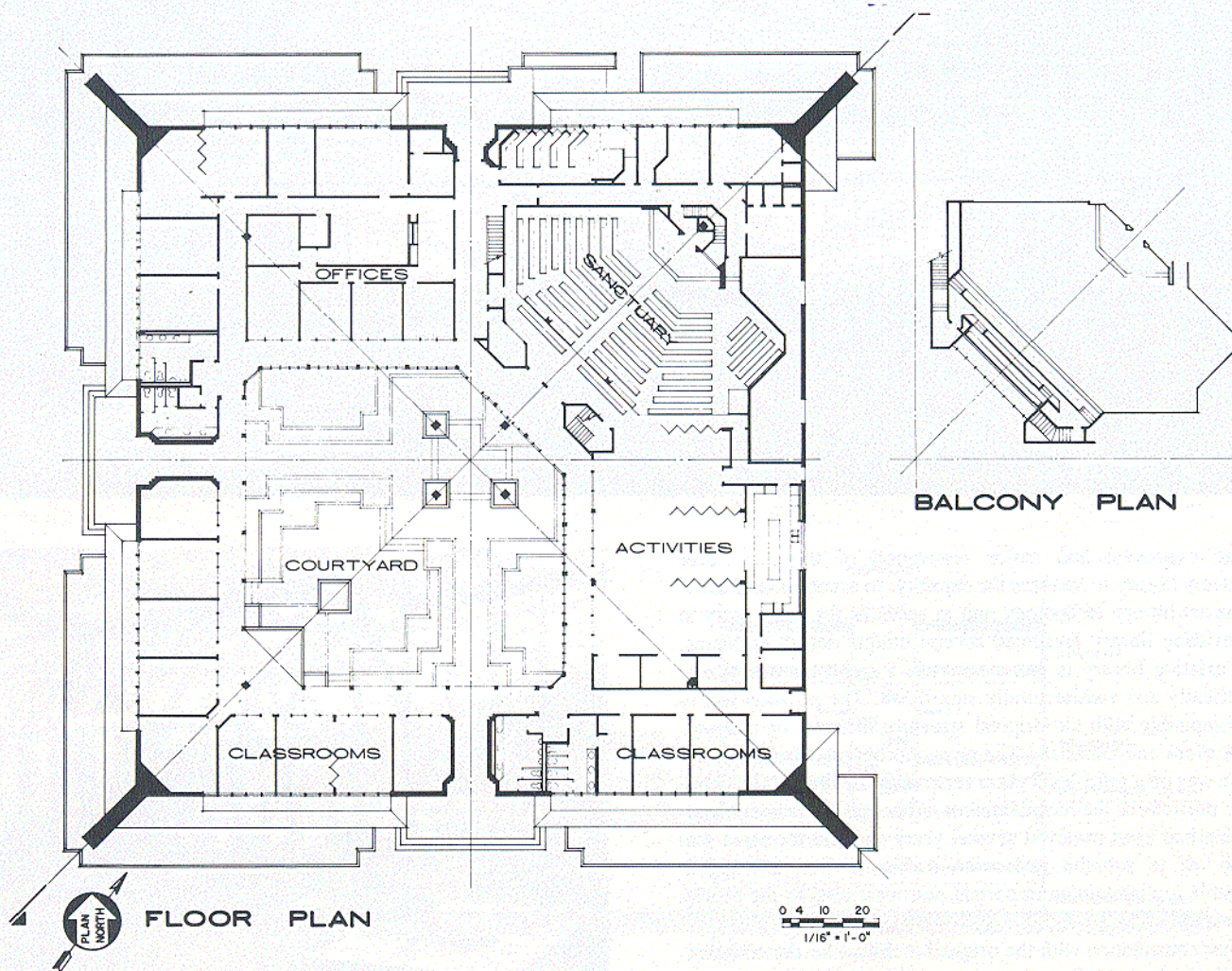


Concept Project

# First Honor Award

Chapel Center  
Lackland Air Force Base, Texas

Designer: V. Aubrey Hallum, Architects/Planners



SECTION



The chapel center design is a strong, singular statement that identifies the building as a special place. The structural form, although not traditional, is ecclesiastical in expression and clearly contemporary in the architectural vocabulary of the South Texas region.

The building is sited beside a major thoroughfare and will serve as an important landmark and as an aesthetic focal point for future base development. The orientation relates the building to the prevailing breezes, the west sun and the cold north winds. The project includes complete chapel services, religious education, chaplain offices and administrative spaces needed to support the religious needs for all military personnel and their dependents who work or live on the base.

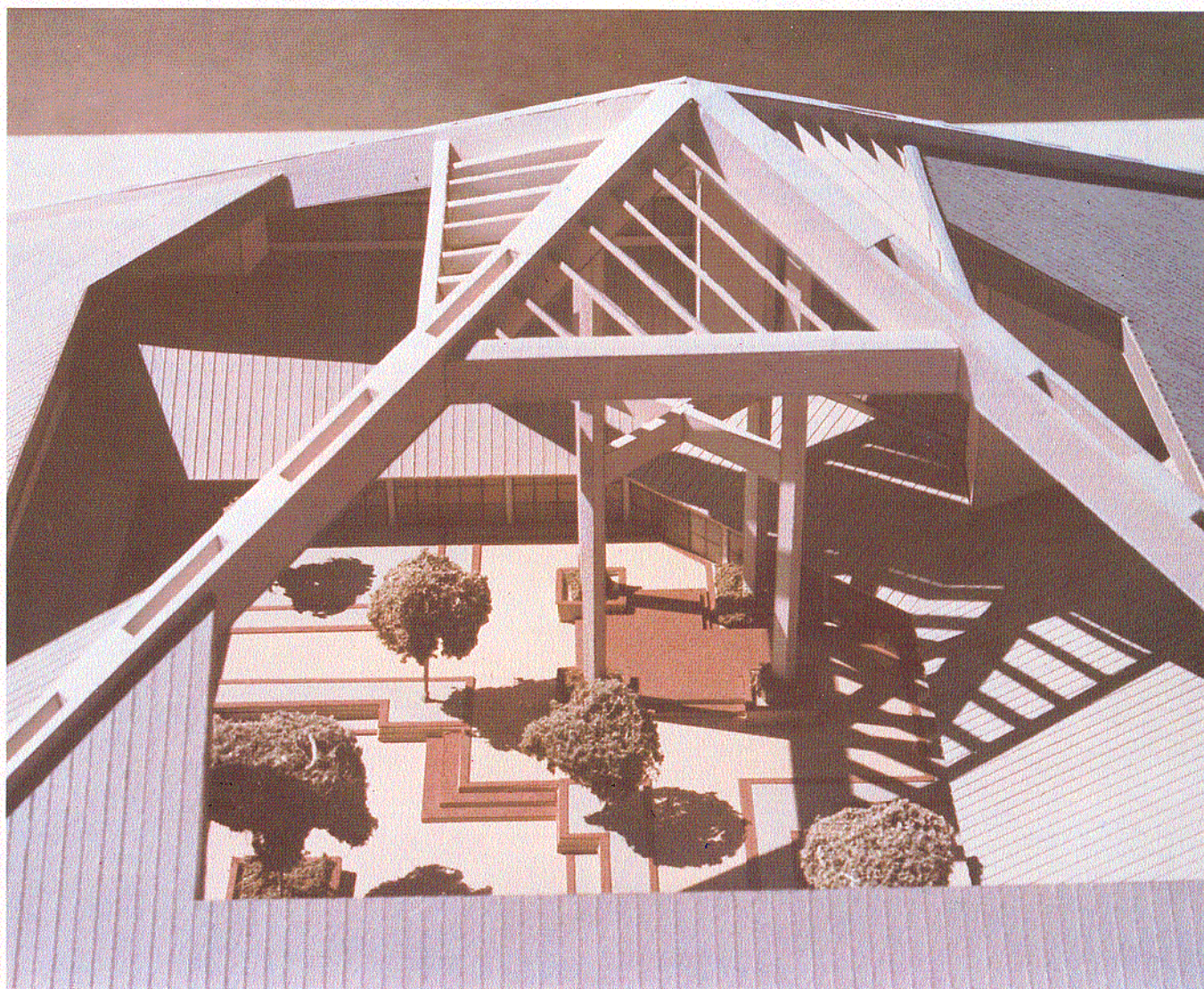
The plan functions around a central courtyard with a surrounding loggia that adds dimension to the interior spaces and creates a special environment completely removed from the rest of the base. The courtyard and the pyramidal structure above it are essential elements in achieving a passive solar design.

The building is heated by passive solar energy. The louvers

over the courtyard are angled to let in the winter sun and to shade the summer sun. Wide overhangs over the windows and carefully located deciduous trees will provide additional shading during the summer. The wide lobby faces south and the dark, clay floor tile will act as a heat sink in the winter.

The classrooms have operable windows to catch the prevailing breezes and are cross-ventilated into the courtyard. Clearstory windows permit natural light and act as thermal chimneys for better air circulation. These rooms can be used most of the year without mechanical heating or air-conditioning. Landscaped earth berms along the perimeter walls also will help keep the building cooler in the summer.

Finish materials were chosen for low maintenance, durability, appearance and graceful weathering. The light-colored architectural concrete, warm gray, standing-seam metal roof, and blue glazed brick relate to the Air Force environment. The rich colored clay bricks and tiles used for paving landscape walls, plus the use of indigenous plants, intensify the regional characteristics of the chapel center.



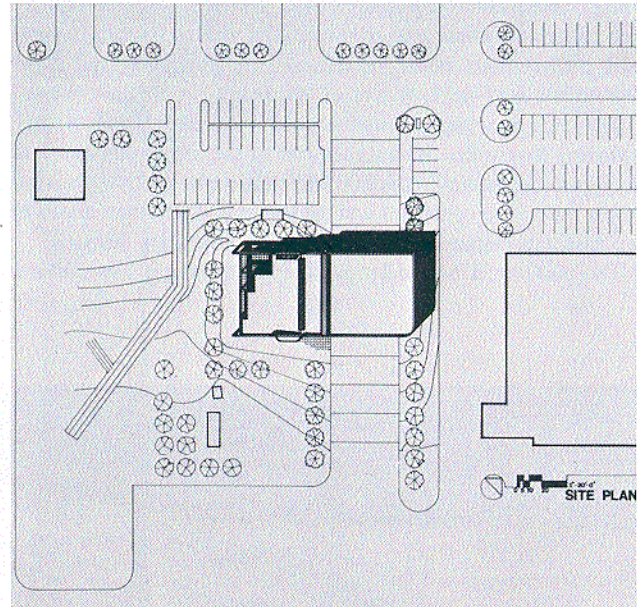
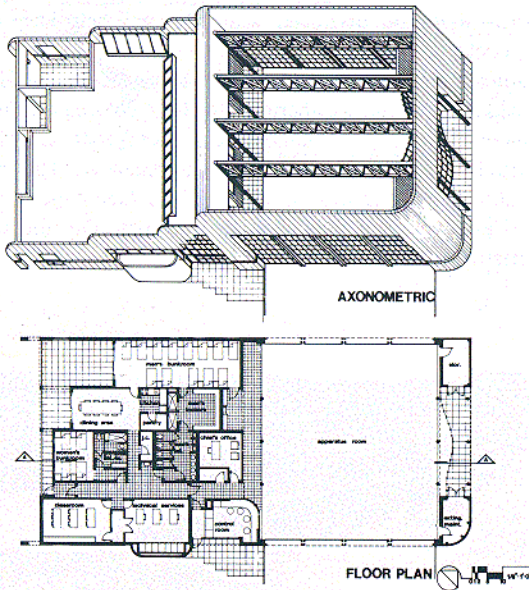


Concept Project

# Merit Award

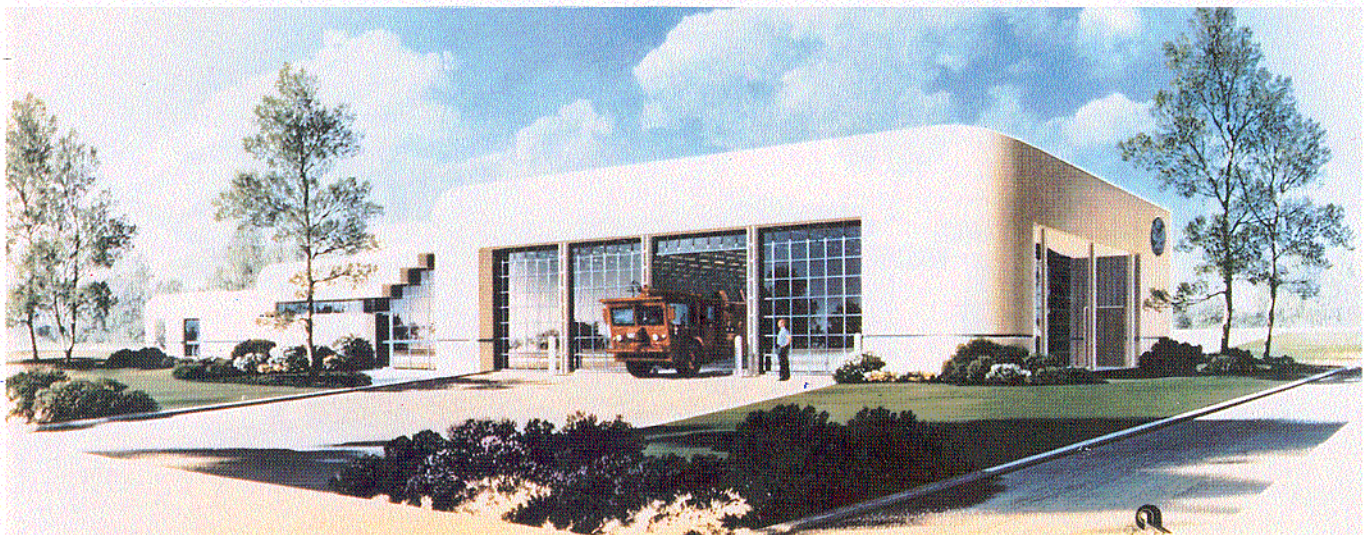
Fire Station  
McGhee-Tyson Airport  
Knoxville, Tennessee

Designer: Barber & McMurry, Inc., Architects



This fire station design aesthetically integrates the functional requirements normally associated with the fire/crash rescue mission and the technology of a number of passive solar features. The facility provides adequate space, well-organized circulation and a well-organized and a well-defined separation of private and public spaces. The drive-through apparatus stalls allow ease of vehicle access and egress and provide flexibility to accommodate future vehicle changes.

The building is oriented to obtain maximum benefit of passive solar heat gain in the living spaces; the apparatus stalls have clear insulated glass on three sides to provide natural lighting and direct solar heat gain in winter months. Wing walls and concrete pavers provide additional reflected radiation and solar heat gain storage for continued radiation at night. Internal and external shading devices control the summer sun.



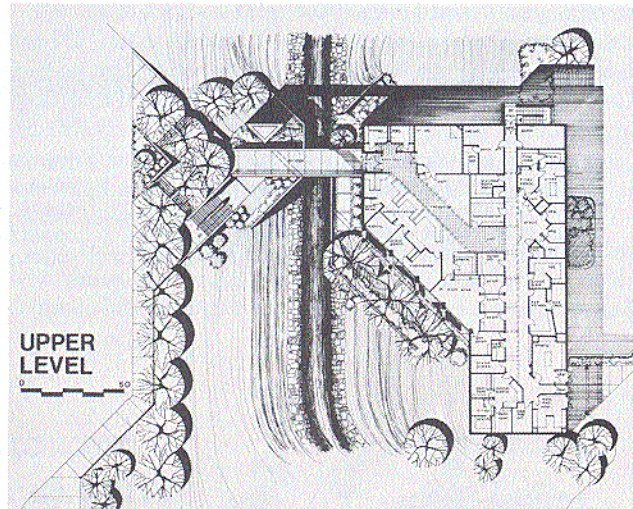
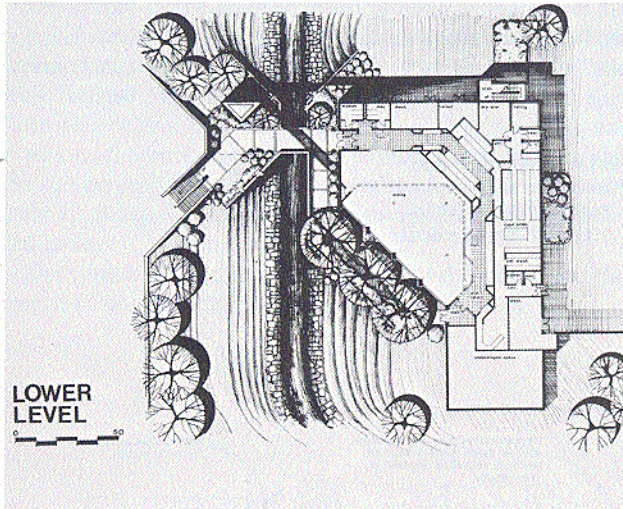


Concept Project

# Merit Award

**Medical Training and Dining Facility  
Nashville Metro Airport, Tennessee**

**Designer: Bayer Edgens, Inc./Gould Turner Group, P.C.**



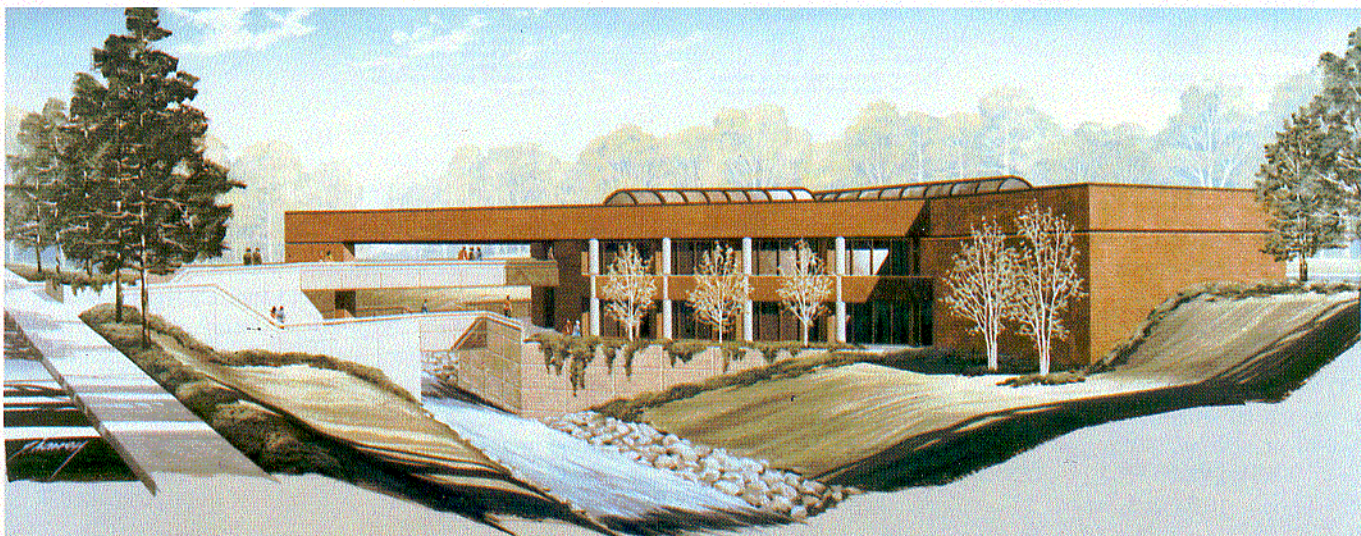
The combination of the unique program requirements for this Air National Guard building and the difficult site conditions presented numerous design challenges. The building must accommodate two separate and incompatible service functions—medical training for ANG and base personnel plus conducting physical examinations for all ANG and Reserve personnel in the local area and a dining hall sized to serve 1,300 personnel within a two-hour period.

Adverse site conditions included steep topography, the presence of subsurface rock necessitating the smallest possible building footprint and a 50-foot wide drainage ditch serving the

entire base. In addition, the design must incorporate energy conservation features in a building which is minimally occupied except on drill weekends.

The site limitations ultimately provided a means of separating the two service functions. The dining facilities are located on the lower level and the medical facilities are on the upper level. Each function has its own entrance.

Exterior glass walls on the south elevation and skylights in the upper level central corridor permit passive solar gain in the winter and natural daylighting throughout the year. Landscaping also will be used for energy conservation purposes.





# Merit Award

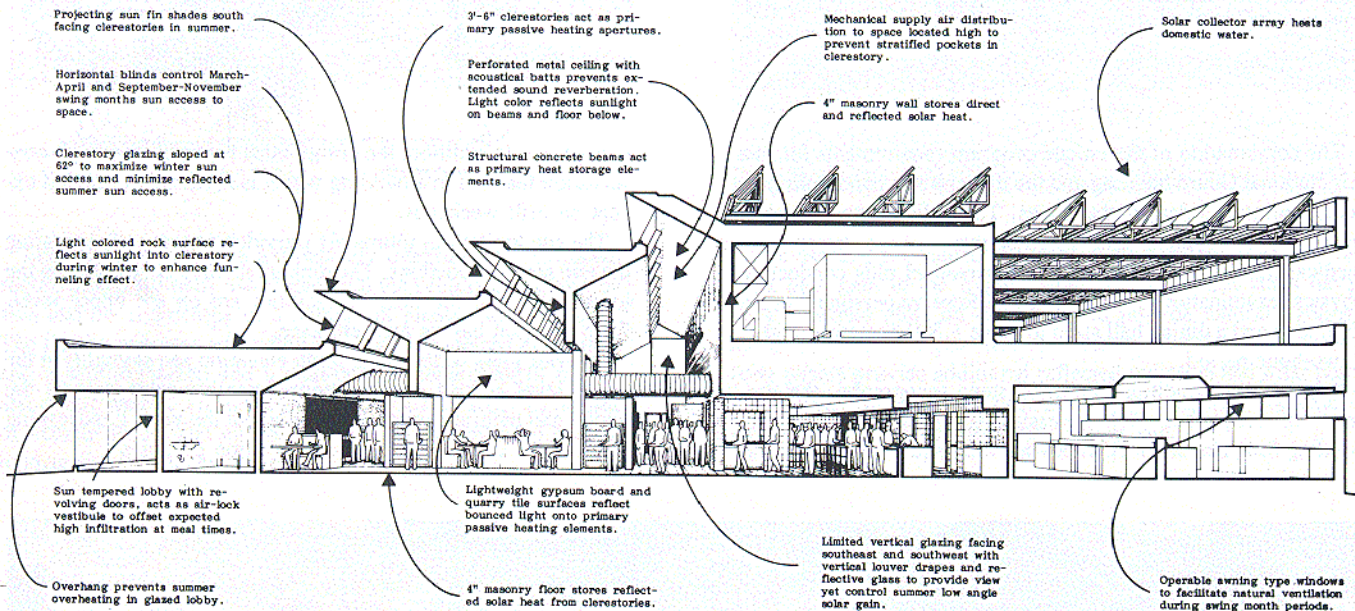
Dining Facility  
Andrews Air Force Base, Maryland

Designer: The Cooper-Lecky Partnership

## CROSS SECTION SHOWING ENERGY CONSERVING FEATURES

The building is a joining of two parts: the front dining space becomes the space to experience in provoking a feeling of flight from the exterior and echoing it again on the interior with

the addition of softer materials and color. The rear kitchen and support areas are simple rectangular blocks, contrasting the stepped trapezoidal dining space.



The dining hall is sited and designed to serve as the focal point of a future airmen dormitory complex. The facility is capable of seating 1,000 airmen and is intended to compete with off-base, fast-food restaurants by providing a more attractive menu and an interesting dining environment.

The design program required air-conditioning in the dining areas, a solar domestic hot water system supplying 35% of the hot water demand, a heat recovery system and passive solar heating. Using the computer program DOE 2, the architects met the design criteria and created an exciting, energy-conscious building.

The building is heavily insulated and all windows are double glazed. The south walls of the dining areas are designed as Trombe walls, with massive poured concrete walls collecting an estimated 75% of the incident solar energy. Automatic louvers control the flow of solar radiation into the building and close at night to retain the heat. Overhangs over the south windows are designed to exclude the direct sunlight entirely during the summer but to allow the winter sun to enter the building.



Concept Project

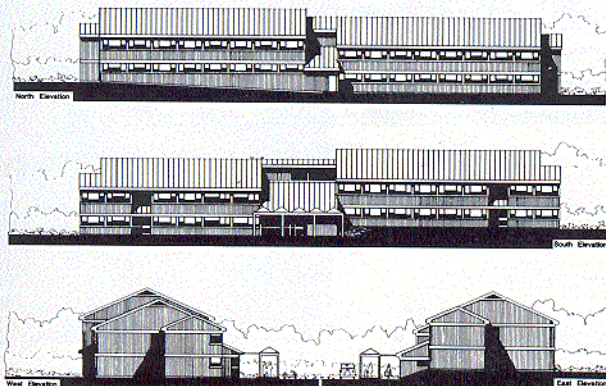
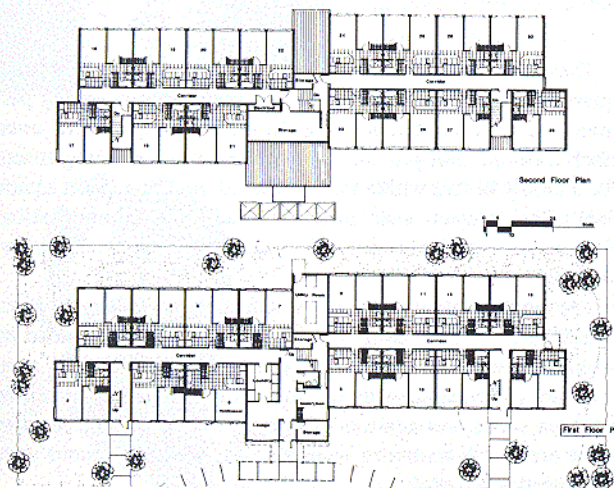
# Citation Award

**Lodging Facility**  
**Hanscom Air Force Base, Massachusetts**

Designer: R. Wendell Phillips Associates

The steeply sloped roofs and vertical cedar siding reflect the regional architectural character for this residential facility which serves as temporary housing for families moving onto or off this New England base. The building is designed as a central corridor plan with a covered loading/unloading area and an enclosed multi-purpose reception area to protect both the users and the service staff from the cold winter weather. The individual units are designed as small apartments complete with kitchens and baths.

Thick insulated exterior walls, triple glazed windows and the compact floor plan help reduce energy consumption.



Concept Project

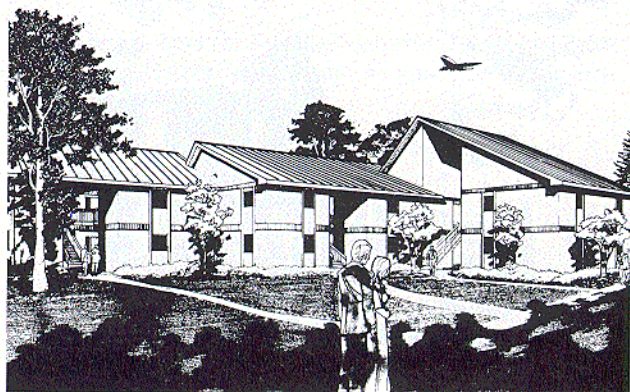
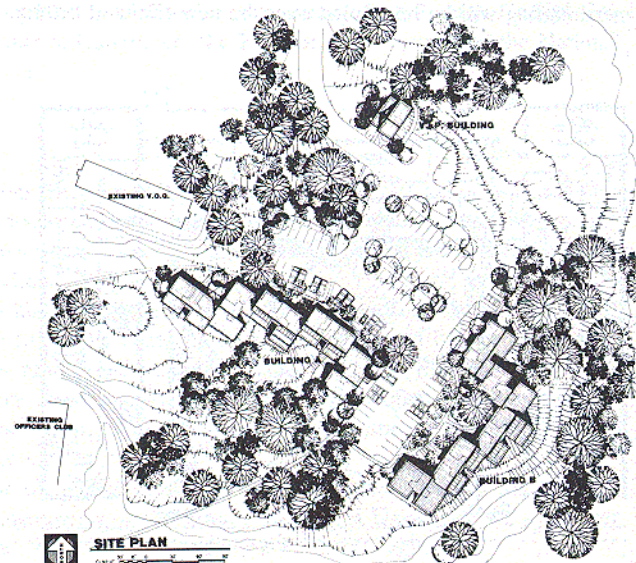
# Citation Award

**Visiting Officers Quarters**  
**Vandenberg Air Force Base, California**

Designer: Schoenwald-Norwood-House-Oba, Inc.

The design for these three buildings to house visiting officers and VIP's takes advantage of the existing topography, minimizes grading and preserves the majority of the existing pine and eucalyptus trees on an unspoiled, sloping and wooded site near the Officers' Club. The one-story VIP quarters and two-story garden type walk-up units provide economy of construction, substantial unit privacy and are designed at sufficient density to permit adequate open space on the site.

The buildings are oriented to accommodate roof-top active solar panels designed to satisfy 75% of the domestic hot water demand. Other energy conservation techniques are incorporated into the design.





## Concept Project

# Citation Award

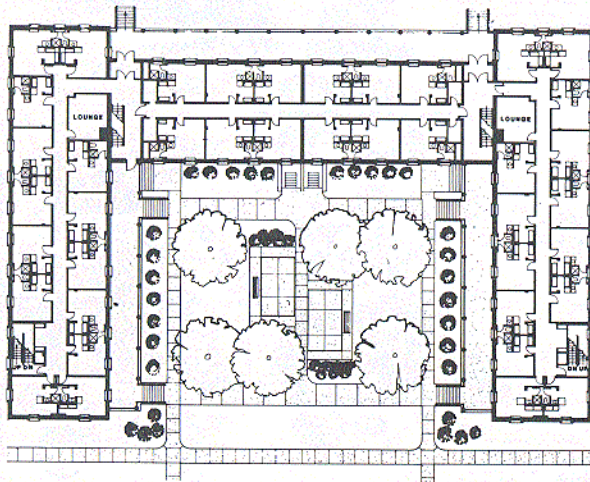
**Dormitory Conversion**  
**F.E. Warren Air Force Base, Wyoming**

**Designer: Davis Partnership, P.C.**

Adaptive renovation of two buildings listed on the State Historic Register and which have been vacant for nearly 30 years presents a difficult, but exciting, task. The interior of these two-story brick buildings will be modified to provide 164 two-person rooms with every two rooms sharing a bathroom. New stairs, fireproofing and sprinkler systems will be added to satisfy life safety requirements.

The exterior of the buildings will be restored to the original appearance. Exterior brickwork will be cleaned, repaired and repainted. Windows will be rebuilt with new double glazing, and the two-story front and rear porches will be rebuilt to the original design.

To complete the historic restoration of one building which has a category I historic designation, the interior lobbies will be restored. The wainscot will be replaced and the existing pressed metal ceiling will be reinstalled over the new fire-rated ceiling.



FIRST LEVEL PLAN

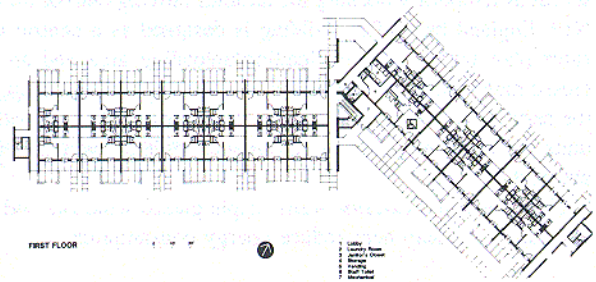


## Concept Project

# Citation Award

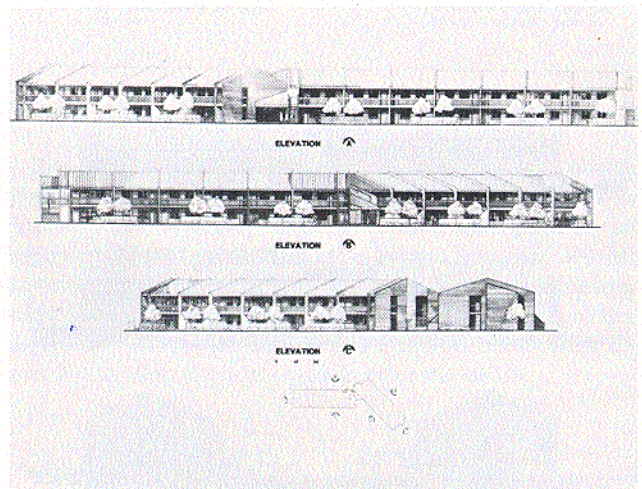
**Lodging Facility**  
**Bolling Air Force Base, Washington, DC**

**Designer: Cohen & Karydas & Associates, Chartered**



These 50 dwelling units are designed to serve as temporary quarters for Air Force personnel and their families during permanent change of station moves in the Washington, DC area. Each dwelling unit provides living, dining and sleeping spaces for a family of five within the authorized limit of 375 net square feet. The project also includes space for administration, housekeeping services, a laundry room, vending machines and storage.

The building is divided into two wings, joined by central stairs and the service core, to fit within the site restrictions caused by an existing sanitary sewer trunk line and to meet passive solar criteria. Landscaping will include earth berms and screening between roads and adjacent parking areas. An evergreen tree wind break will minimize winter winds, while deciduous trees will provide necessary shade in the summer.







J. Peter Winkelstein, FAIA, is a senior principal in the San Francisco firm of Marquis Associates. His firm specializes in institutional and private projects in architecture, planning and interior design. Current projects include a major renovation of the San Francisco airport, a music department building for Stanford University, a corporate headquarters for a design professionals' insurance company and student housing for the University of Alaska.

He received both his B.A. and M. Arch. from Harvard University. Winkelstein is past president of the San Francisco Chapter/AIA, having served also as vice president and director. He is a director of the California Council/AIA and served last year on its nominating committee. Winkelstein's national AIA activities include serving on the Design Commission, the 1983 Planning Committee, and the 1984 Grassroots Planning Committee. He is also a member of the Urban Planning and Design Committee.

Winkelstein also is consulting architect for San Jose State University and has been an adjunct professor at San Francisco State University.



R. Bruce Patty, FAIA, was elected first vice president/president-elect of the American Institute of Architects at the 1983 AIA National Convention. Patty is a founding principal in the Kansas City firm of Patty Berkebile Nelson Associates Architects Inc. where he is involved in the architectural design of commercial, institutional, transportation, education, restoration and housing facilities.

Patty received his B.S. in Architecture from the University of Kansas. He has served on the university's advisory board to the School of Architecture and Urban Design and was a chancellor associate. He was recognized as the School of Architecture's 1983 Distinguished Alumnus.

Patty currently chairs the AIA Membership Services Commission. He represented the Central States Region on the AIA Board from 1980 to 1982 and was chairman of the Practice Commission in 1982. Patty has served on the Finance Committee, the Practice Commission and the National Convention Site Selection Task Force.



Michael C. Brooks joined Parsons Brinckerhoff in 1980, following 20 years as a military engineer with the U.S. Air Force working on major construction projects in the U.S. and overseas. He is a Senior Vice President and general manager of Parsons Brinckerhoff Construction Services, Inc., which is headquartered in McLean, Virginia.

As general manager, Mr. Brooks has responsibility for all domestic and international construction management operations of the firm. The company is currently engaged in the construction supervision of several major bridges, tunnels and railroads, including the new Elizabeth River Tunnel in Virginia and the Ft. McHenry Tunnel under Baltimore Harbor. Before assuming his new responsibilities, Mr. Brooks was resident engineer on the underground tunnel for the Philadelphia Center City Commuter Rail Connection.

Mr. Brooks received a Bachelor of Science degree in Civil Engineering from the Virginia Military Institute and a Master of Engineering degree from Texas A&M University. As a member of the jury, Mr. Brooks represented the Society of American Military Engineers.



Donald A. Noon is President and Chief Executive Officer of MCI Constructors, Inc., a Springfield, Virginia company he founded in 1974. The company has completed \$150,000,000 in construction contracts in nine years.

Mr. Noon received a Bachelor of Science degree from Oregon State University. He is past President of the Mechanical Contractors District of Columbia Association. As a member of the jury, Mr. Noon represented the Society of American Military Engineers.

## Jury



# Department of Defense Design Awards

The Department of Defense Design Awards Program biannually recognizes outstanding architecture, engineering and landscape design in projects designed for the military services. Awards may be given in ten categories and the best overall project is given the Blue Seal Award.

Air Force projects received four of the eight awards announced by the 1984 jury, including the Blue Seal Award. The Air Force projects recognized were:

## *Blue Seal Award:*

Air Force Academy Library  
Colorado Springs, Colorado

Henningson, Durham & Richardson, Inc.

## *Excellence in Architecture For Engineering:*

Heating Plant  
F.E. Warren Air Force Base, Wyoming

Stearns-Roger Services Inc.

## *Excellence in Architecture for Welfare and Recreational:*

Commissary  
Los Angeles Air Force Station, California

Leidenfrost/Horowitz Associates

## *Excellence in Architecture for Architectural Facilities:*

Regional Operations Control Center  
Griffiss Air Force Base, New York

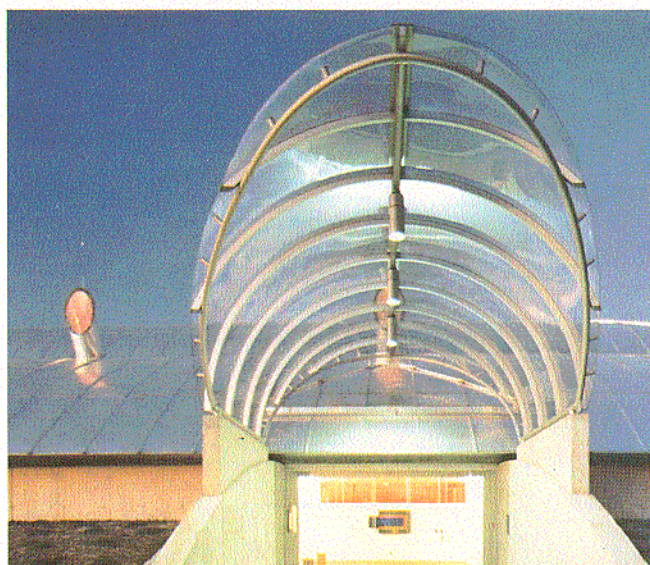
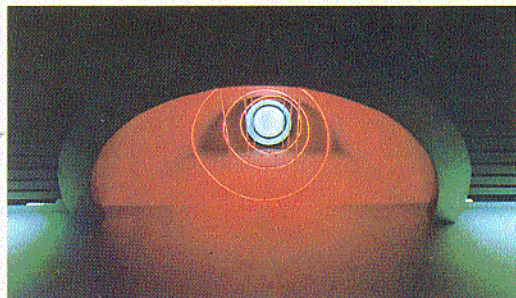
Stetson/Dale



# Department of Defense Design Award Excellence in Architecture for Architectural Facilities

Regional Operations Control Center  
Griffiss Air Force Base, New York

Designer: Stetson/Dale



The Regional Operations Control Center (ROCC) at Griffiss Air Force Base plays a key role in the nation's air surveillance system. The facility houses personnel and equipment to receive and monitor data from six radar sites and to provide information about all aircraft approaching North America.

The facility is on a base that has a collection of diverse, utilitarian buildings. The floor plan was predetermined by the Air Force and the design criteria permitted no windows and established stringent energy consumption limits. The A-E firm responsible for the design created a remarkably strong and innovative design despite these restrictions.

A vaulted roof of gleaming, standing-seam aluminum gracefully curves down to an energy-efficient earth berm. The small amounts of exposed perimeter walls are shaded by a generous overhang; all air intakes, vents and other mechanical equipment that normally would penetrate the roof is located in the soffit.

An entrance canopy of clear plexiglass on an aluminum frame provides an interesting contrast to the roof form which is unbroken except for 10 futuristic aluminum-clad snouts. These snouts are skylights located above the central U-shaped corridor and add daylighting while providing a fiery-red glow at night.



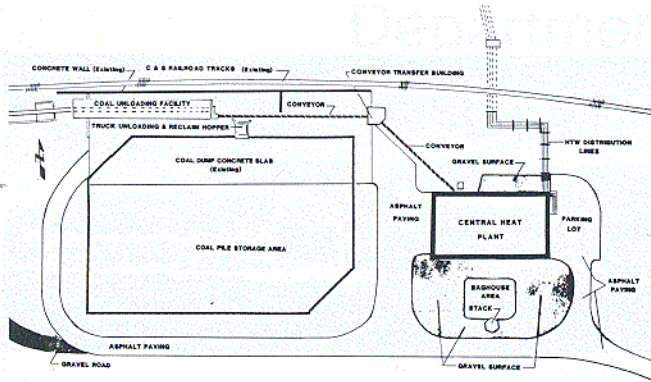


# Department of Defense Design Award Excellence in Architecture for Engineering

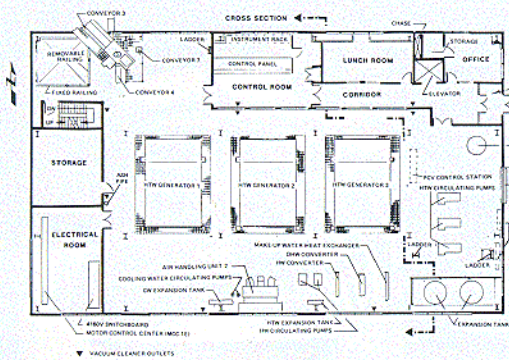
Heating Plant

F. E. Warren Air Force Base, Wyoming

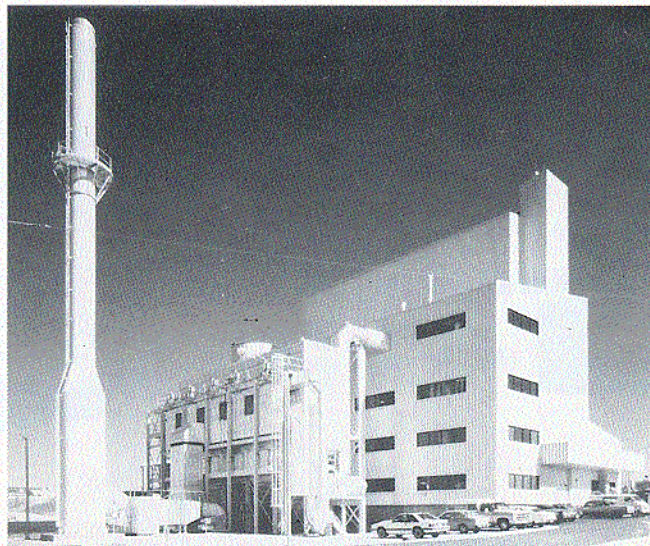
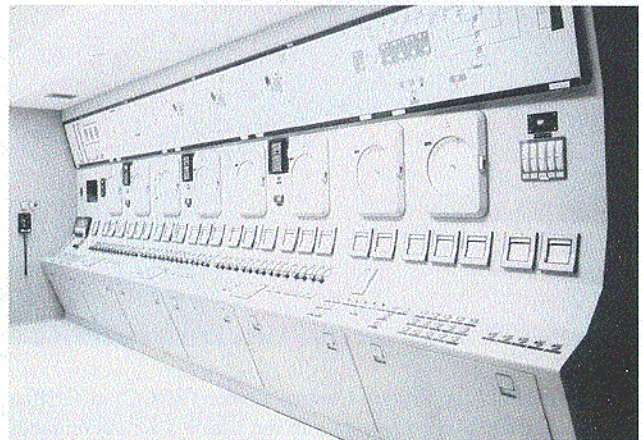
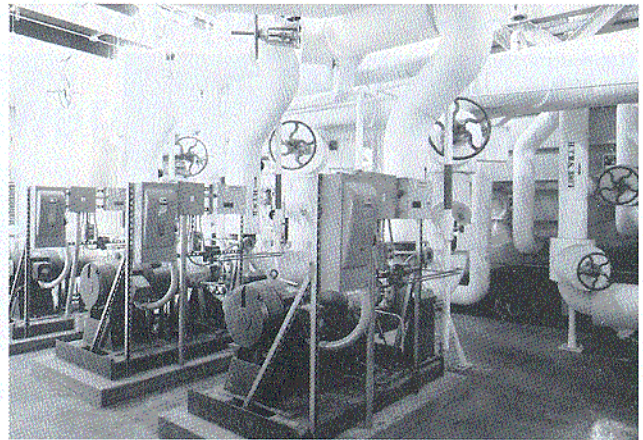
Designer: Stearns-Roger Services, Inc.



SITE PLAN



FLOOR PLAN - OPERATING FLOOR



The new heating plant at F.E. Warren Air Force Base was designed in cooperation with the Wyoming Historical Society since that base has been designated as a state historical site. Siting of the facility was dictated by the location of the main railroad line, the existing coal unloading and storage area, a small stream and other environmental concerns.

The plant is part of a new base heating and distribution system which replaces an earlier system of individual natural gas hot water or steam generators in each of 111 buildings. High temperature water is generated by three coal-fired high temperature water generators and pumped through a distribution system 7½ miles long. The distribution piping is buried in concrete trenches with removable covers for ease of maintenance.

All local, state and federal air and water pollution standards are satisfied by the design. Air pollution is controlled by covered conveyors, five gas baghouses, low sulfur coal and dustless unloading of the ash system. Water pollution is controlled by dumping polluted water into evaporation lagoons near the plant.