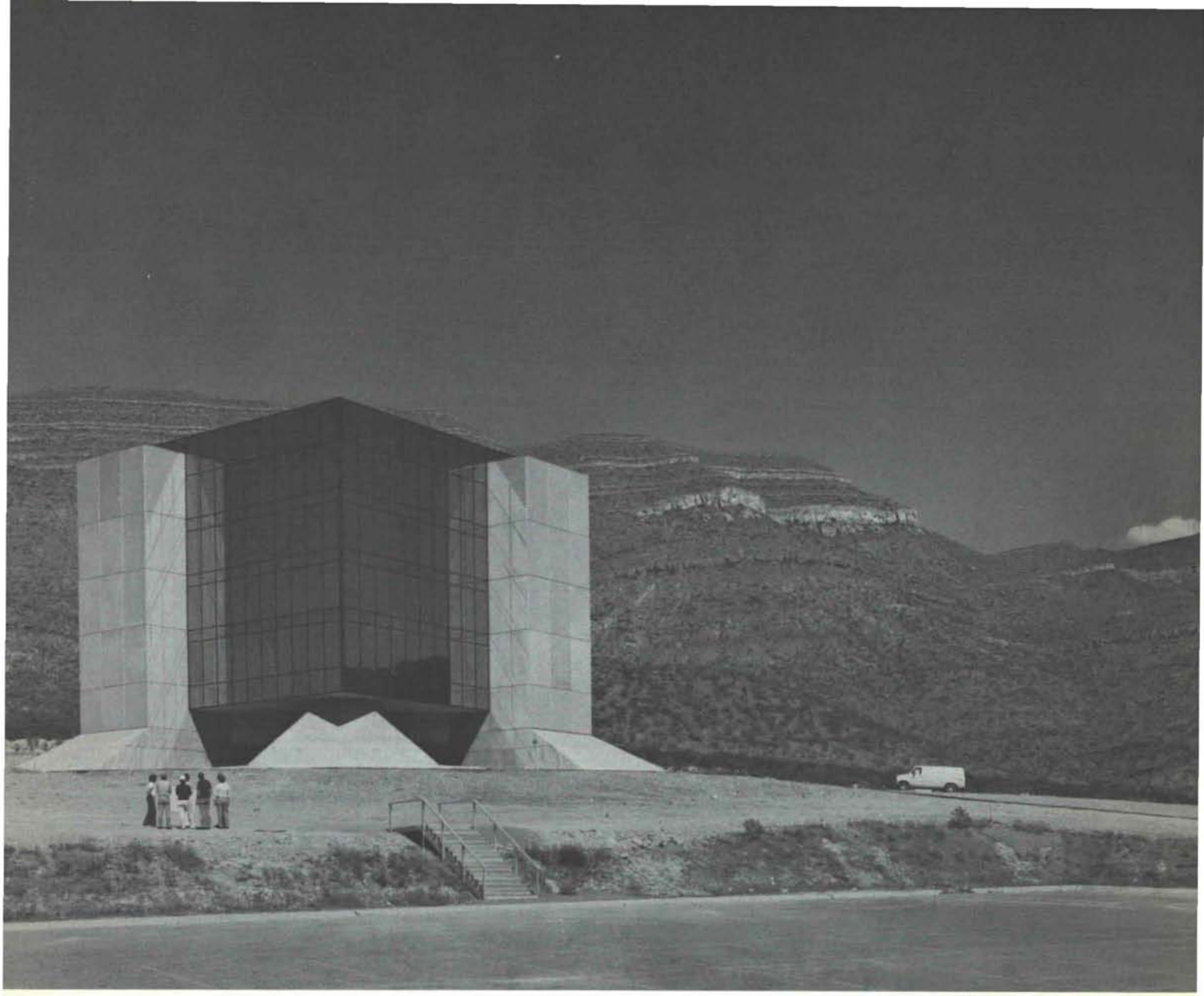


The International Space Hall of Fame

Alamogordo New Mexico

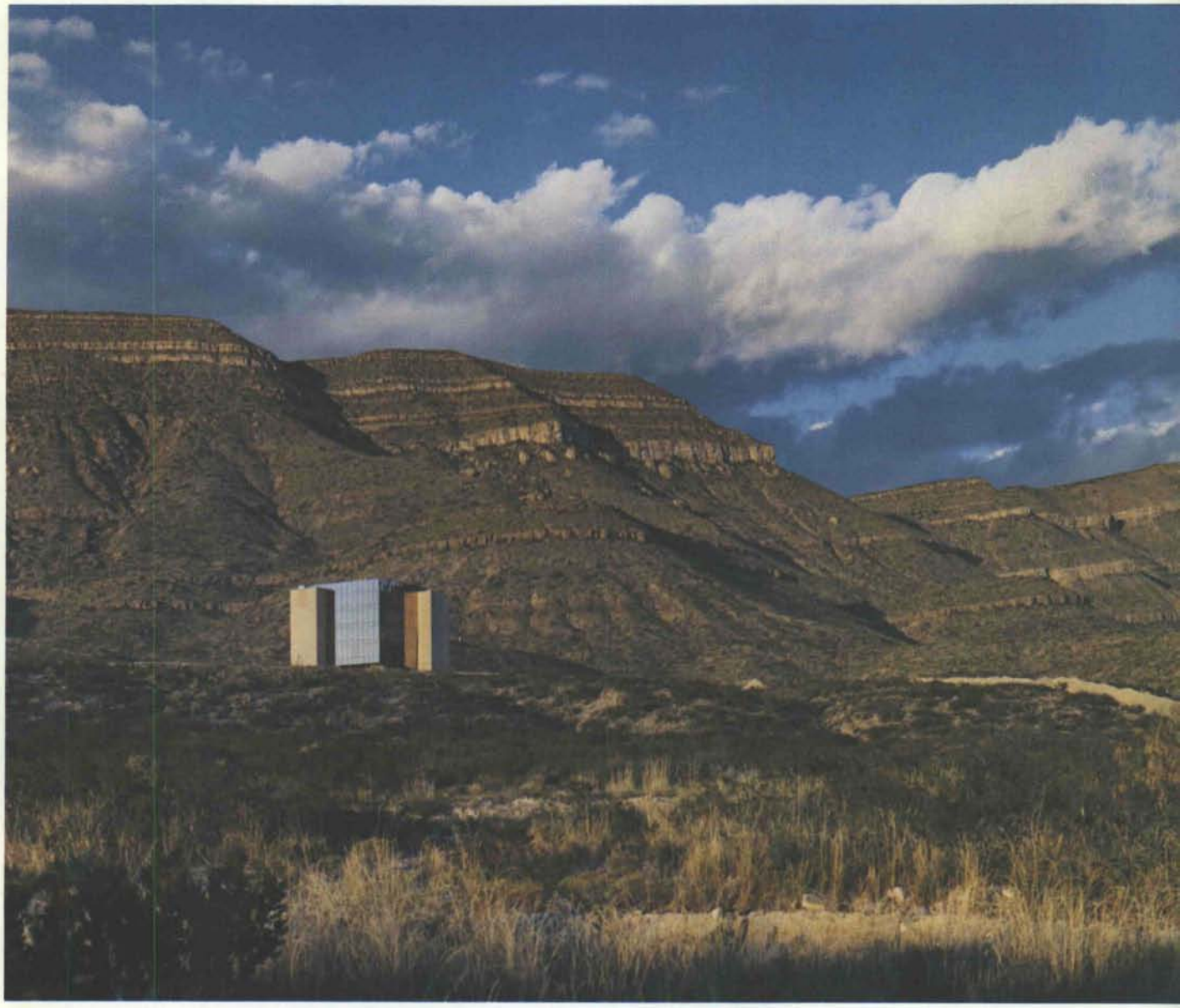
Charles E. Nolan, Jr., AIA
Architect

David Sollenberger
Photographer

The 1976 recipient of the New Mexico Arts Commission Award in the Field of New Construction.

1976 NEW MEXICO ARTS COMMISSION AWARD

For Excellence in the field of New Construction.



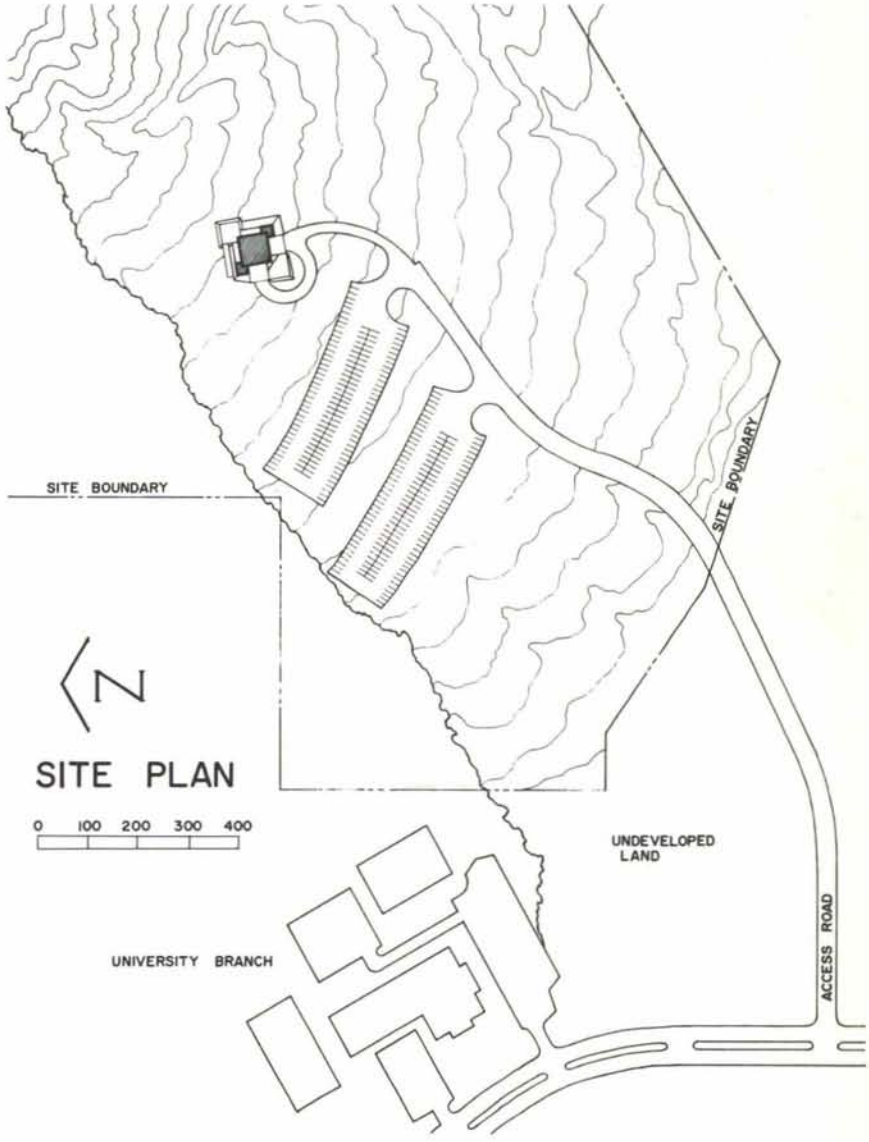
Mr. Dwight A. Ohlinger, former mayor of Alamogordo and owner of an insurance and realty firm, conceived the idea of a Space Hall of Fame while watching a commercial for the Football Hall of Fame on July 25, 1973. He contacted several community leaders who agreed to back the promotion and establishment of the project. Requests were sent to U. S. Senators Joseph M. Montoya and Pete Domenici to stake the claim of Alamogordo to this project by reading it into the Congressional Record, which they did. A request was made to Dr. Charles Stark Drapper, president of the International Academy of Astronautics, for an endorsement by his organization. He gave his personal endorsement, and later received the endorsement of his organization and their agreement to nominate the candidates to be honored in the Hall of Fame. Bruce King, then governor of New Mexico, issued a proclamation designating Alamogordo as the site of the International Space Hall of Fame. The Alamogordo Motel Owners Association voted unanimously to petition the Alamogordo City Council to turn over $20,000 per year of the lodgers tax to fund promotion and advancement of the project, which the city council did.

An ad hoc committee was formed to carry out the development of the project. They approached Charles E. Nolan, Jr., A.I.A., local architect, for assistance in developing preliminary concepts, cost estimates, and preparation of a promotional brochure to use in raising funds. The committee also made initial contacts with various land owners for availability of land for the project.

The project was presented to the New Mexico Legislature in January, 1974, with the recommendation of Bruce King, governor, for preliminary funding of $1.8 million. After presentations by the architects and community leaders to House and Senate committees, the legislation was unanimously passed by them to the legislative houses for final consideration. Letters were received, meanwhile, from Dr. Charles Stark Drapper, Werner von Braun, and Neil Armstrong committing their support for creation of this significant project. The House and Senate passed the legislation unanimously and the bill was signed into law just nine months after the initial idea by Dwight Ohlinger.

The governor appointed the initial members of the International Space Hall of Fame and in July, 1974, presided personally over the first meeting. Mr. Ohlinger was named co-chairman with the governor of the commission.

The commission retained Charles E. Nolan, Jr. & Associates as the project architects. The preliminary designs and concepts were refined for the Hall of Fame building and presented to the commission for approval in September, 1974. After a cost revision, approval was given for the construction documents to proceed in October, 1974. Construction documents were completed in April, 1975, submitted for reviews by state agencies and the commission, and bids were taken on May 13, 1975. Frank Tatsch, general contractor, from Silver City, N. M. was awarded the contract with a low bid of $1,346,900 for the 28,111 square foot build-



ing. Mr. Tatsch has established a good reputation as a quality contractor in the southern New Mexico area.

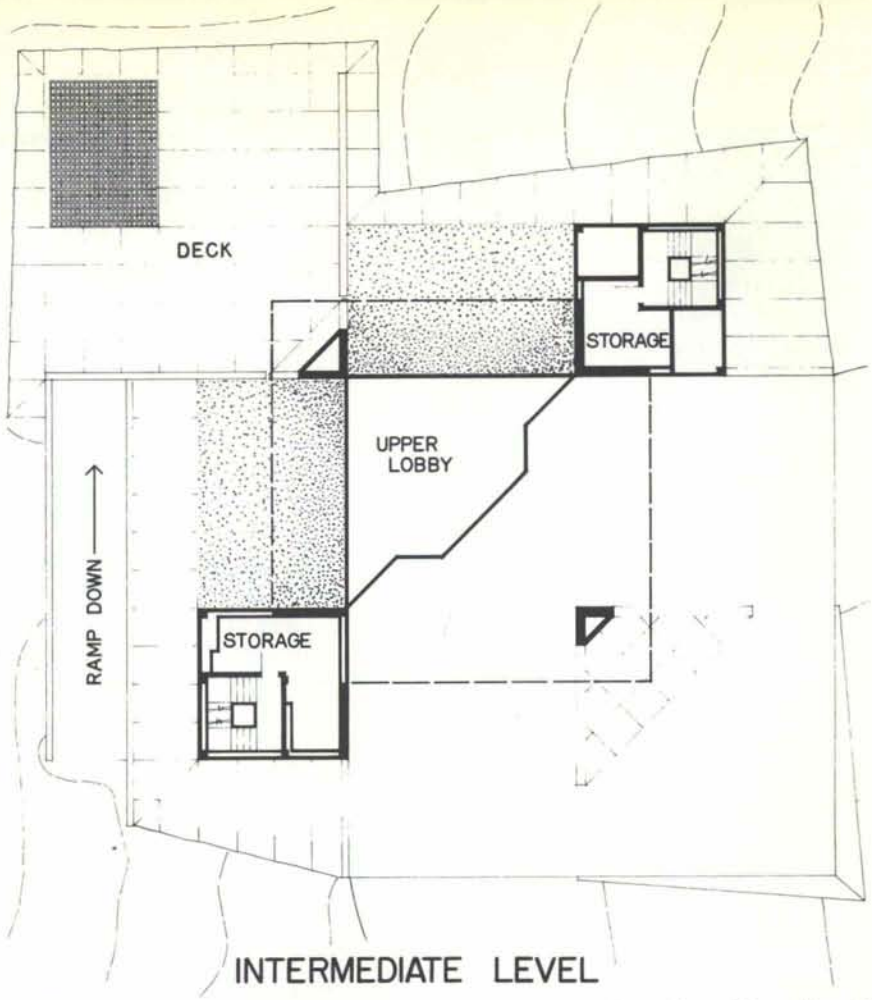
The Program

As there are few Space Halls of Fame around for development of program information and background, the architects were faced with the requirement of totally researching the concept and preparing a program which would have to remain flexible to allow for future space achievements, which would have impact on those being honored and on the display and housing of space artifacts.

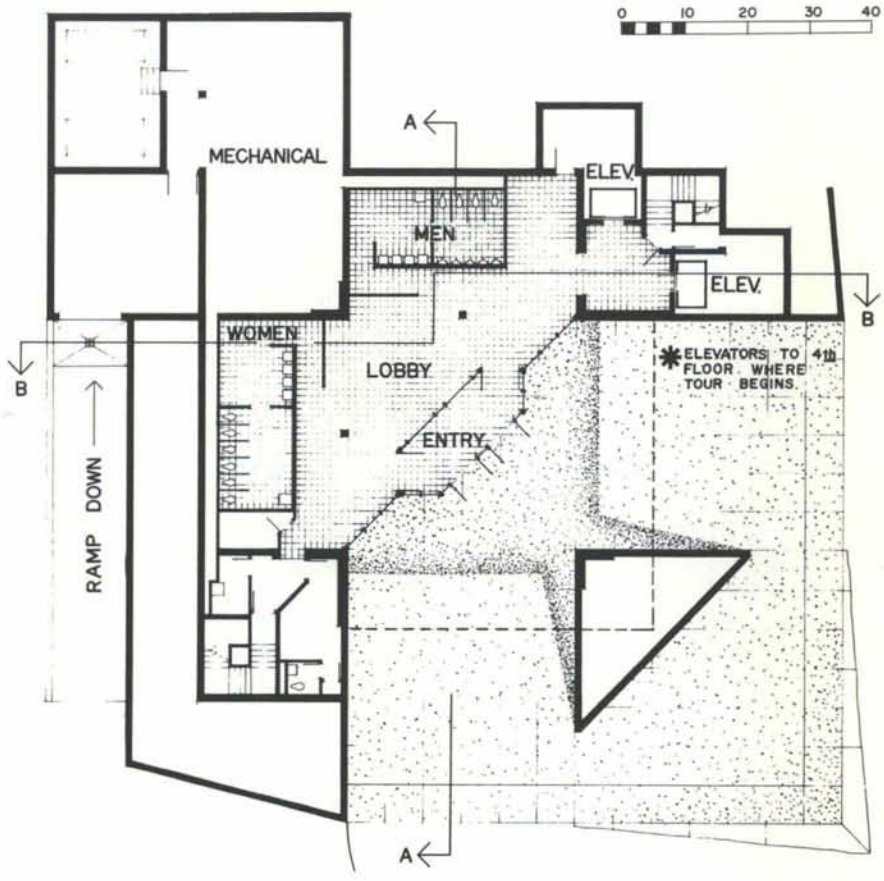
A visit was made by Charles Nolan and Kent Roberts, member of the ad hoc committee, to Huntsville, Alabama, to view and examine the Alabama Space Museum and NASA Visitor Center. This excellent museum pioneered several methods and variations for display of space items. One major concept was the use of dynamic and static displays. Visitors liked the dynamic displays which allowed them to operate small experiments and games which demonstrated space and physics principles. It was decided at this time to separate exhibits of this type from the Hall of Fame honorees in order to retain the honor and dignity of those being enshrined. Also, it would allow the exhibits to be developed with greater variety for maximum visitor interest. A prime requirement of the ad hoc committee at this time was for the project to be financially self-sustaining if possible, like the Alabama Museum.

NASA and the Smithsonian Institute, as the repository of space artifacts, has a wealth of movie film taken in space and it was decided to include an auditorium which could be divided into four small theaters for continuous showing of a variety of space films.

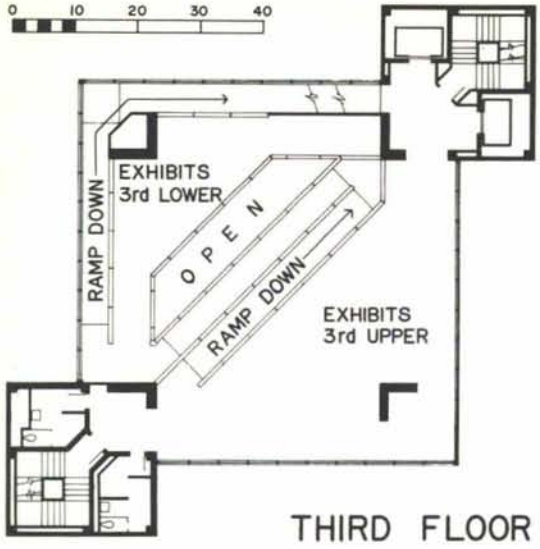
A planetarium was requested to be included by the Space Hall of Fame Commission, in order to provide educational opportunities for learning more of space accomplishments in relation to all of our solar system and near space.

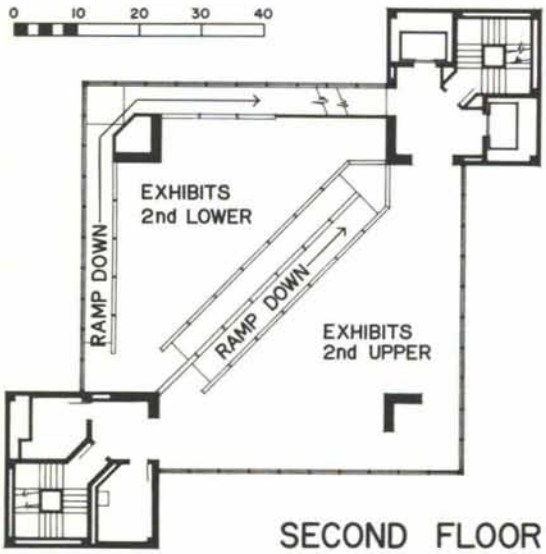


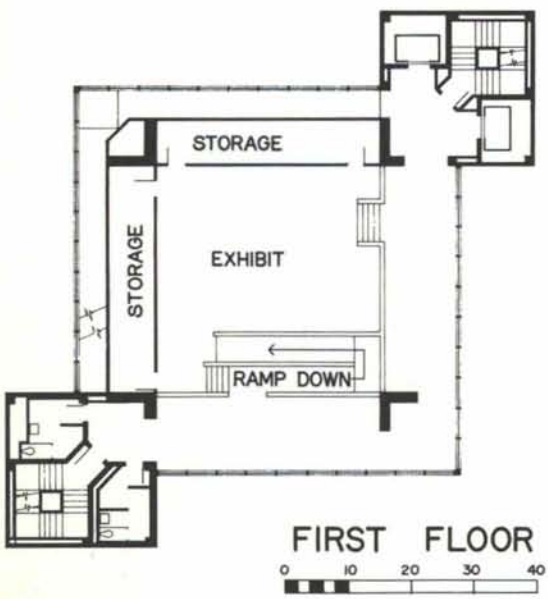
INTERMEDIATE LEVEL



GROUND FLOOR

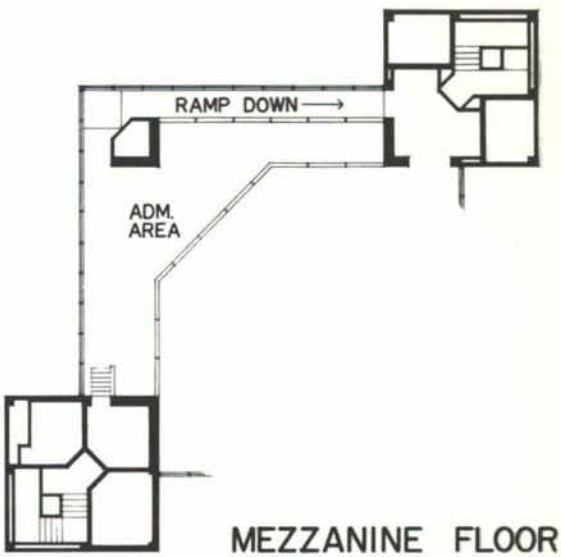


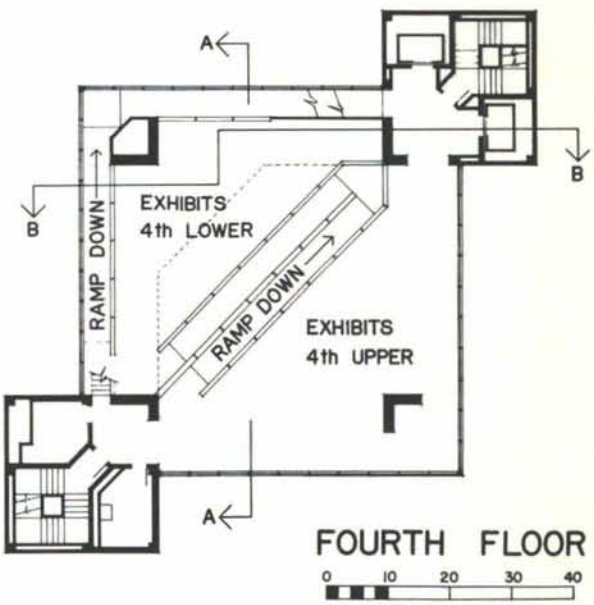




As the selection of artifacts for display would be made in the future and as the artifact displays would be ever changing with future space achievements, flexibility became the major design concept requirement. All spaces in the main exhibit building were to be able to accommodate a variety of sizes and types of items. An interplay of static and dynamic displays would be required for maximum interest and to subdivide the larger spaces into smaller spaces with better relation to human size viewers.

The major thrust of the exhibits within the facility is on man, his theories and discoveries which led to space exploration, and his





achievements in space. With man the major focus, the goal will be for spaces and exhibits which relate to the viewers of these displays in this facility.

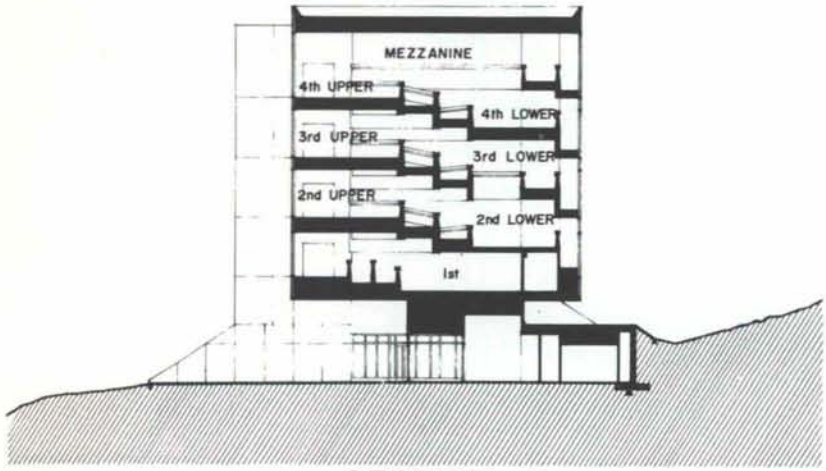
The Design

The first problem of such a project was to select a site that would provide access to visitors and be of some prominence. The city of Alamogordo is located at the base of the west side of the Sacramento Mountains in south central New Mexico. The mountains rise about 5,000 feet above the valley floor and provide a dramatic backdrop for the city. The decision was made to locate as high on the foothills as possible. A site was selected above the Alamogordo branch of New Mexico State University, northeast of the city and higher than any other building in the city. This site is on a planned major arterial which will allow adequate traffic access. It also poses a few problems. The foothills are full of arroyos which carry the heavy mountain rainfall in the summertime, but otherwise remain dry most of the year. There were no city utility services at the site. This meant negotiating with the city for extension of these services. Also the site has a slope of from 5% to 10% which is covered with sagebrush and low desert brush growth. The site was also discovered to be the home of a sizeable colony of rattlesnakes when construction began.

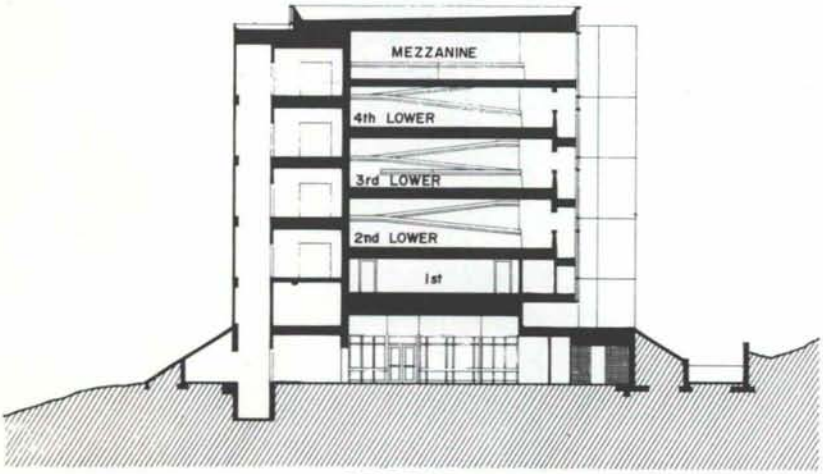
A major consideration in designing the visitor traffic flow through the Hall of Fame cube was the high altitude of Alamogordo. At 4,300 feet elevation, visitors coming from locations lower in elevation suffer from a lack of oxygen when climbing stairs or walking long distances. It was determined that the flow of traffic through the project would be from the top floor down and would have to be by ramps as the budget was too limited to permit the inclusion of escalators. The ramps are located on the diagonal of the cube and along two faces of the cube leaving two other faces free for exhibits. The triangular halves of floors created by the ramps on the diagonal were offset vertically to aid in reducing the length of ramp required from each floor to the next. Also this provided for elevated viewing of certain artifacts of a dramatic nature.

The design was approached from the idea of creating a visual attraction that would contrast with the mountain backdrop. There is little in space that does not create a contrast when man enters that environment, thus there was a basis for this project to be a contrast with its surroundings.

Early in discussions, the concept of using a sphere for the Hall of Fame was considered but discarded for reasons of technical difficulties. The concept then changed to the possibility of using a cube which could have a gold glass exterior as being a suitable form for the Hall of Fame. In the original design the cube was placed on one point to create an impression of space, both interior and exterior. Discussions with glass and curtain wall manufacturers revealed this bordered on technology pioneering as there would be sloped surfaces on all cube faces with the bottom sloped surfaces being critical as to retention of glass for safety purposes. The upper surfaces also became airfoils with strong lifting forces due to the southwest winds which prevail in the valley. The extreme cost of developing adequate curtain fall members and insistance of the glass manufacturers on wire screens to restrain the under slope glass led to the decision to place the cube in a conventional vertical/horizontal position for exhibit and ancillary buildings, a forty foot module was established as an economical spacing for prestressed concrete members, and



SECTION A



SECTION B

the design developed on this forty foot module. Also, this space provides the necessary large interior volumes for display of the various sizes and types of space artifacts. This module would allow the design to be stepped down the ground slope to provide additional vertical space for large artifacts.

Footing excavation presented the initial construction problem which the contractor had anticipated. Although soil boring tests in seven locations on the site indicated mostly alluvial fill and gravel, excavations for drilled cassion footings encountered very large rock formations too large for economical removal. Frank Tatsch had suspected this and was ready to assist in the change. John Fulgenzi, structural engineer consultant from Amarillo, was called to re-design the footings for the encountered conditions. The footings were redesigned using large spread footings.

Interior colors were kept toward earth tones in order to provide contrast with the bright colors used on the exhibits. *C. N. Jr.*